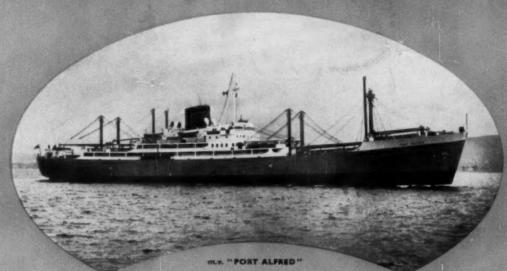
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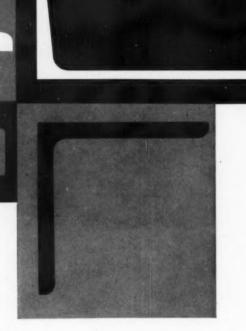
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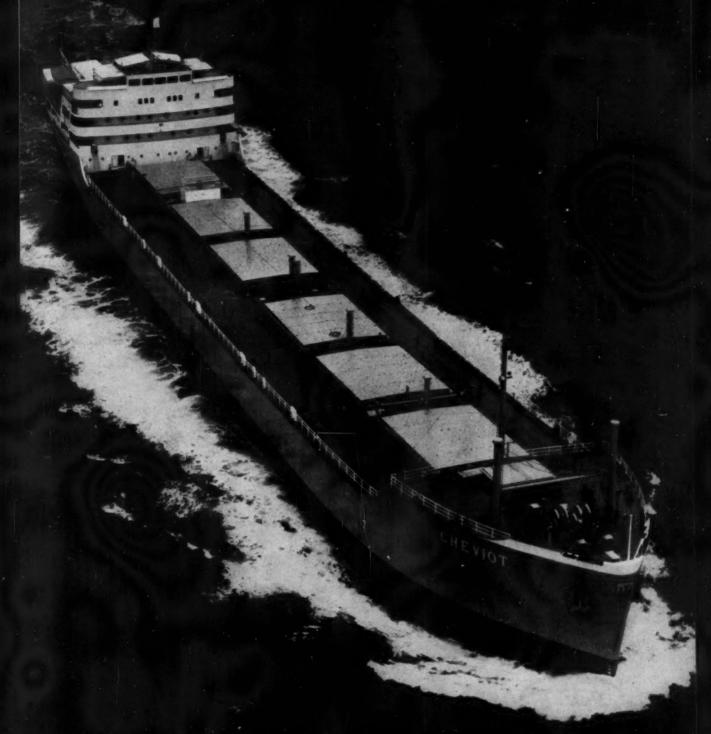
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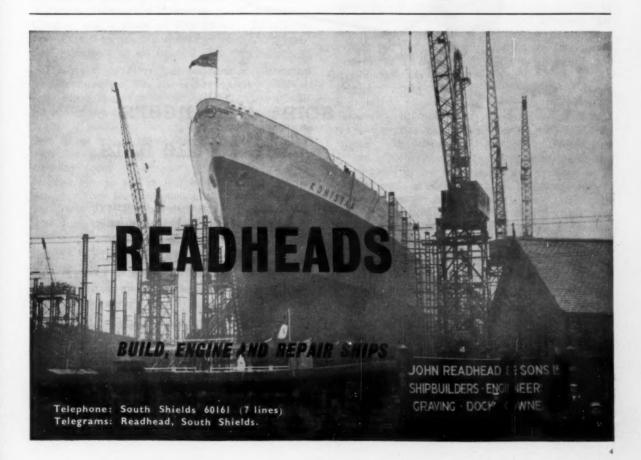
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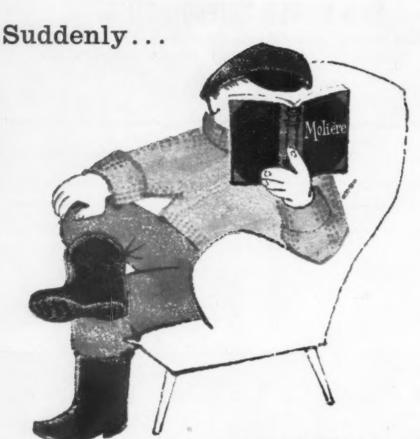
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... some Engineers take to the arts

People say Chiefs have less and less to do in bunkering ports. True or untrue? Wild exaggeration or temperate fact?

Agreed there is much less tedious tank-dipping after bunkering. Shell have installed quite a few bulkmeters (reliable, non-fib). Agreed there is much less to-do about blending. Shell have installed

quite a few blenders (speedy, exacting).

What do Chiefs do with the hours saved? For some it means quicker turnabouts. But for others? Lately in Gib., a Chief played a trumpet voluntary after a Shell bunker. In Dakar, another read Molière to his crew. Vive le progrès Shell everywhere.

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THE SHIPPING WORLD

EXPORT OPPORTUNITIES IN EUROPE

THE recently-published report of the sub-committee set up by the Shipbuilding Advisory Committee gave an expert opinion of the work that the British shipbuilding industry can expect from British shipowners in the period from the current year to 1965 inclusive. The figure given was 4 mn tons gross, which is equivalent to 800,000 grt a year, and therefore represents about 50 per cent of the industry's potential output (estimated by the sub-committee at 1,600,000 grt per year). If this forecast proves correct, any improvement on a 50 per cent output level must come from exports. Shipbuilding is one of the industries whose prospects for exports to Europe are discussed in the report of a series of fact-finding missions, organised by the Export Council for Europe, which visited nine European countries earlier this year. The Council itself is a body sponsored by the Federation of British Industries. the National Union of Manufacturers, the Association of British Chambers of Commerce, the Trades Union Congress and a group of City banks. It includes among its 31 members a number of people with practical experience of shipbuilding and shipping.

The report mentions four countries in connection with shipbuilding. The first is Norway, the traditional main export market of British shipyards, where it calls for a vigorous and cooperative effort to increase exports. It points out that in 1951 Britain built more than 50 per cent of Norwegian requirements, while by 1959 this figure had dropped to 1.8 per cent. It is currently about 10 per cent. The reasons given in Norway for the fall in British exports are familiar enough. They are inadequate credit (five years compared with 10 to 12 years from other countries); price quotations up to 10 or 12 per cent above those of competitors; a poor record on delivery dates; and building times in the less modern yards up to two or

three times longer than in Sweden, Germany or Holland. Looking through this list, it can be said that something has been or is being done about several of the points mentioned. Equally it is clear, from the fact that the current round of Norwegian ordering has bypassed Britain, either that insufficient has been done or that not enough publicity has been given to it.

In Sweden, it appears, the general complaint is that British shipbuilding and allied interests do not seek or maintain contacts with Swedish buyers; and that replies to queries, if forthcoming, are deficient in technical information. The report comments that much more could clearly be done to make the achievements of British shipbuilders known in Sweden, where E.F.T.A. tariff changes are unimportant since everything concerned with shipping enters duty-free. Portugal praised British-built ships, and has taken delivery of ships to a value of more than £40 mn since 1946. Spain has its own shipyards (and these, it may be mentioned, often supply much auxiliary equipment that would be subcontracted in Britain), but there is a market for navigational equipment and for engines below about 2,000 bhp, in which power range imported engines are cheaper than those made locally. average of about 71/2 per cent of the value of a ship is imported.

Summing up these facts, it is obvious enough that the investigating teams found that the only European country with substantial potential for British ship exports is Norway. If, following the granting of better credit terms by the Government, any concerted effort is to be made to obtain exports in the European field, Norway is clearly indicated as the main target, with Sweden a possibility where the chances have very probably been improved by the availability of Swedish-designed diesel engines and steam turbines from British licensees.

Current Events

Independent Airline Orders

THE TWO major British independent airlines this week announced the placing of orders for new jet aircraft. Cunard Eagle Airways have ordered two Boeing 707s with Rolls Royce Conway engines, costing about £6 mn, with an option on a third. The company is also considering the purchase of Vickers VC.10 aircraft for late 1964. British United Airways has made the venture of being the first to place an order for an entirely new type of

aircraft, the British Aircraft Corporation's BAC 111, whose first flight is scheduled for the spring of 1963. British United has ordered ten, costing about £8 mn, with an option on a further five. Explaining this action Mr F. A. Laker, executive director of the airline, said "We believe that this new aircraft will be ideal not only for the short and medium-range routes for which we have applied to the Air Transport Licensing Board, but also for our existing business. Although we have not yet been

given permission to operate the new routes, we feel our case is strong enough for applications to be favourably received". The Licensing Board is to hear these applications, together with those of Cunard Eagle, Tradair and Overseas Aviation, on June 20, when they will meet the implacable and uncompromising opposition of Lord Douglas, chairman of British European Airways, who desires to protect his monopoly position, presumably on the grounds that he has enough to do to compete with foreign nationalised airlines without having to compete with private enterprise as well.

Changes in Dual Valuation Clause

THE Institute of London Underwriters has announced changes in the wording of the Dual Valuation Clause and a new clause has been issued under the date 1 May 1961. These changes are essentially those of clarification of the existing principles already established and apply to all hull insurance. The Dual Valuation Clause for use with marine hull policies has come into favour with shipowners over the past few years for a number of reasons, more particularly in the case of insurance on war-built tonnage which was originally purchased and insured on the high values prevailing before 1956. In most instances these original values for insurance have been drastically reduced, but, for obvious reasons, many vessels of this type are still insured for rather more than their present market value. The Dual Valuation Clause offers a number of advantages to shipowners in this situation. Indeed the continuing high cost of ship repairs on such vessels, coupled with their comparatively low tonnage values, are essentially the conditions which this clause was designed to meet as far back as 1925. The shipowner undoubtedly benefits by having a hull insured value for total and/ or constructive total loss purposes which is in line with current market values. With repair costs maintained at a high level it would be impossible to achieve this realistic total loss value and at the same time obtain adequate protection under the other sections of the policy covergeneral and particular average and collision liability to other vessels. The Dual Valuation Clause is intended to meet this difficulty. From the shipowner's point of view, if this clause were not available, in the situation which exists today for war-built tonnage, the cover under a hull policy for constructive total loss would be almost non-existent, because in most policies the insured value quoted is to be taken as the repaired value for the purposes of ascertaining whether there is a claim for constructive total loss under the policy. Where the insured value of a vessel is maintained at an artificially high level it would be impossible in most practical cases to establish that the cost of repairing the vessel would exceed this high insured value and, further, no reasonable shipowner would consider incurring repair costs of this magnitude on a vessel with a real market value which was very much lower. To the underwriter, of course, the primary advantage is that the clause permits a realistic valuation for total loss purposes, at the same time providing satisfactory cover for the owner on the other sections of the policy at an appropriate bulk premium.

£1,000,000 Trawler Contract

A SHIPBUILDING contract worth about £1,000,000 has been signed between the Government of Ghana and Seawork Ltd for the construction of six long-range fishing vessels. This important export order, a rare thing in British shipbuilding these days, has been won in the face of severe competition from Continental shipbuilders, and there can be no doubt that a great deal of effort has been put into the winning of it. Salesmanship and service, which include the personal visits of technicians, the high

standard of modern design and equipment offered, coupled with a reasonable amount of standardisation and bulk ordering of components, and early delivery dates-all these have doubtless helped to tip the scale. The designers, Burness, Corlett & Partners, for some months have been carrying out exhaustive tests and research, in consultation with the fishery authority of the Ghana Government, and selected Ghana trainees will attend the construction of the vessels to form the nucleus of a repair and maintenance staff for them. All six will be 130-ft vessels of Hydroconic hull design, four laid out as tuna purse seiners, with Sabroe refrigeration plant and complete air conditioning of accommodation, and two as stern trawlers with the Unigan gantry arrangement. The contract will be divided equally between T. Mitchison Ltd, Gateshead, and P. K. Harris & Sons Ltd, Appledore, to be completed by the end of next March, with the first two vessels expected to be fishing early in November. Their performance will be watched with interest, since they represent a major step in the promotion and development of the West African fisheries.

Discharging Grain at Sea

An interesting experiment took place early this month in the Humber estuary at a point about 14 miles seaward from the Hull Docks, when more than 500 tons of wheat was sucked from a deep hold of the Ellerman's Wilson Line cargo ship Marengo and pumped into waiting barges. The experiment was successful. It was conducted by the Ministry of Transport and proved that grain and other foods could be supplied to Britain even if her ports suffered a crippling attack in a wartime air raid. The grain was discharged by a floating elevator and it was the first time in Britain and probably in the world that discharge had been made in this way in an open waterway. The ferry steamer Lincoln Castle carried observers who included representatives from the Ministry of Transport, the British Transport Commission, the Royal Navy, a number of shipowners and grain im-The difficult tidal problems of the Humber caused the organisers to choose this place for the test. Commenting on the experiment, the Ministry official in charge said the average rate of discharge (about 100 tons an hour) was highly satisfactory. It was conceivable that as grain ships grew rapidly larger, existing berths might be unable to cope and the Humber experiment had proved an alternative method of discharging grain was available should it be needed, but there was no intention at the moment of developing the system as a permanent commercial proposition.

Passenger Ship Sale

THE SALE to an Italian firm of the French twin-screw motor passenger liner Lavoisier ends a long period of rumour regarding this ship's future. She has been idle at Havre since 28 February 1957 and during that time rumours have linked her with possible sales to various shipowners, including Italians, Greeks and the Polish Government. Now she has realised about £500,000 with prompt delivery on an "as is" basis, presumably with survey due. She dates from 1950, when she was completed by the Chantiers de la Loire at St Nazaire, and she is propelled by twin-screw Sulzer engines which give her a speed of 16 knots. Her passenger accommodation is for 100 first-class and 326 third-class but unconfirmed indications are that the new owners will be having the ship almost gutted out and the passenger accommodation greatly increased. As yet the sale of the Lavoisier is subject to French Government approval, but in view of the obvious fact that the owners have been having difficulty in selling the ship, this might well be forthcoming. At the same time such approval has in the past been the main difficulty in this and other French ship sale deals, so such permission is by no means a matter of course. In any case the buyers are known to have inspected a number of other passenger vessels of somewhat similar vintage and size, so they obviously have other vessels available if this deal falls through because of licence refusal.

Medical Plan for Seafarers

THE Joint International Labour Organisation/World Health Organisation Committee on the Health of Seafarers, in its third session in Geneva, has recommended the urgent establishment of an international scheme designed to provide coordinated medical advice to ships at sea. The Committee held that it would be advisable to develop such a scheme as soon as possible. The scheme would incorporate the three existing medical aids at sea: medicine chests, medical guides and the use of radio. Although the facilities for the treatment of venereal disease of seafarers throughout the world have greatly improved since 1924, when the Brussels Agreement was adopted, details of its incidence are still very scanty. It is hoped that nations which have not yet adhered to the Agreement will be encouraged to do so. The Committee also felt that general medical examinations were an essential and integral part of any health service for seafarers. It felt that the carrying out of two separate examinations -(a) a pre-registration, and (b) a pre-entry examination prior to the seamen actually taking up duty on the ship, would do much to improve the health of the seafarer. The Committee is strongly in favour of all seafaring nations instituting such examinations as an essential feature of their health service. Finally, the Committee emphasised the need for a seaman to be given a detailed report on his discharge from hospital in order to ensure continuity of medical care.

The Laws of Subrogation

IN THE case of Yorkshire Insurance Co Ltd v Nisbet Shipping Co Ltd, the insurers sought to recover from the owners of a vessel a sum in excess of that paid under the terms of the insurance policy in respect of the abandonment of the vessel and the total loss of claim. It was in 1945 that, after collision with a Canadian naval vessel. the Blairnevis was beached and the owners gave notice of the abandonment of their interests in the vessel and claimed a total loss in the amount of £72,000, which sum was paid by the insurers. Subsequently in 1946, with the approval of the insurers, the owners successfully brought proceedings against the Canadian Government, recovering a sum of \$336,039, being the dollar equivalent to £72,000 at that time. When this amount was transferred to the U.K. sterling had been devalued, and as a result the owners realised the sum of £126,971, nearly £55,000 more than the sum received from the insurers and, in fact, some £51,000 more than the real value of the vessel. The owners returned to the insurers the sum of £72,000, which had been paid under the insurance policy, but the insurers submitted that they were entitled to the whole of the sum recovered from the Canadian Government. The important issue that arose was whether the insurers were entitled to receive more than they had paid. It was held that the insurers were not entitled to any more than they had paid and, in so ruling, the Court drew attention to the fact that the insurers had contracted to pay the assured the amount of his actual loss and if, before the insurer had paid, the assured had recovered from a third party a sum in excess of the actual loss, then he could not recover from the insurers because he had not suffered a loss. It had never been suggested that in these circumstances the insurers should recover the amount in excess, and the Court failed to see why a fundamentally different result should be implied in an insurance contract merely because the insurers had already paid. The assured had repaid to the insurers the amount of their claim and it was held that subrogation rights of the insurers did not entitle them to recover more.

Seaway Statistics

THE 1960 Traffic Report of the St Lawrence Seaway. even more than the first, is something of a statistician's Traffic is analysed upwards and downwards, by commodity, by country of origin and destination, by class and type and length and size of carrier, by nationality, by selected ports in Canada and the United States, by monthly records, and in other ways; and then all the subdivisions are repeated for different sections of the Seaway. There are, in fact, no fewer than 59 different tables. The statisticians may be allowed their fun, for more than with any other world waterways, they are catering for a variety of interests. A new set of tables introduced with the 1960 report covers the combined traffic of the Lake Ontario and Welland Canal sections, voyages through both sections being counted as one. It is therefore the best guide to total Seaway movements of goods and ships. Transits on this basis, downbound, totalled 5,124 ships of 14,385,000 nrt and 21,374,000 grt. Cargo movements totalled 33,707,000 tons, of which 22,648,000 tons were in the outwards direction. major change in the pattern of cargo movements last year compared with the Seaway's first year of operations was a sharp reduction in iron ore from St Lawrence ports to Hamilton and Lake Erie. This was offset to some extent by increases in downbound cargo, particularly through the Welland Canal. In the Montreal-Lake Ontario section total cargo traffic, both ways, fell by 1.4 per cent and in the Welland Canal it rose by 6.2 per cent.

In the Red

THE BROAD facts which emerge from a study of the Seaway traffic figures confirm the picture of the waterway as predominantly a domestic, bulk cargo route. Lake vessels carried over 76 per cent of the total cargoes. In general, however, ocean shipping, though reduced slightly in numbers, showed an increase in ship and cargo tonnage in practically every main category and direction. Nearly half the total upbound tonnage was in ballast-2 mn grt in the case of ocean-going ships and 8.2 mn grt in the case of lakers. According to the report, toll revenue amounted to \$11,427,000, slightly up on 1959. The outstanding problem of the Seaway is that this revenue, even before deducting running expenses, is insufficient to cover depreciation and the burden of interest charges on original capital expenditure. In falling so short of original expectations of the economic experts, who gaily forecast 50 years ahead, the Seaway is accumulating losses at a rate of up to \$10 mn per annum at a time when further heavy capital expenses must be faced. The major financial burden rests on the Canadian partner and the Authority, after recording a loss on last year's operations of \$9.4 mn (in spite of an accountancy saving of over \$3.8 mn in the item of depreciation), has announced its intention to "re-appraise its financial structure and re-examine its financial position with respect to the Welland Canal." The most sensible thing would be for the American and Canadian Governments to write off the original expenditure and cease the pretence that the Seaway is, or should ever have been regarded as, merely a good commercial gamble. There will be political storms whichever way the books are eventually balanced. But the balancing will have to come. Red is not a becoming colour for a waterway.

ON THE "BALTIC"

THE INCREASING SIZE OF TRAMP SHIPS

By BALTRADER

It does not matter how efficiently a shipowner manages his ships nor with what care and skill he charters them, he will not be truly successful if he does not make more right judgments than mistakes at the very start, that is when he comes to order his next vessel from the builders. The old saying "a dear ship never pays" may have less force than in prewar years, in view of the ever increasing wages content in the building of a ship, but time will tell whether the current price of ships will prove to be an excessive weight to carry in the "Grand International" of world trade.

But price is not the only factor in the choice of a new ship; the problem of size is possibly exercising the mind of the tramp shipowner more than any other matter for decision. The bigger the vessel the more restricted is her trading potential, by reason of the limitations of merchants' requirements and of port facilities. But this is a diminishing handicap and it is certainly remarkable how charterers have adapted themselves to the increasing size of vessels and have, in many cases, come to prefer the very large ship because of the lower freight acceptable. North American and near Continental ports load and discharge very large tramp ships and 20,000-dwt grain carriers are now appearing in the United Kingdom, Australia and China. The growing size of tramps in turn affects the cost per ton of building and operation, so that more and more owners are turning their attention to building up to something over 20,000 dwt. Only last week a vessel with a cargo capacity of 26,000 tons was fixed for two consecutive voyages from Hampton Roads to Japan, and it is in trades such as this that the really large ships are ideal. In this particular example the charterers were able to agree "six days Sundays and holidays included" for the combined loading and discharging operation-a remarkably small time allowance for handling such a large coal cargo.

Russian Charterers

For some time now a feature of the freight markets has been the activity of Russian charterers. In the early part of the year they were quite content to fix on a voyage basis to cover their very substantial purchase of sugar from Cuba, but more recently these operators have taken ships of all types and sizes on time charter. Initially the Russian charterers sought vessels for time charter able to give delivery Cuba, from where they could immediately load outward sugar cargoes. Alternatively they took delivery of tonnage in or near the Black Sea, no doubt with the intention of beginning the charters by loading cargoes from U.S.S.R. Black Sea ports to Cuba.

The next stage was for Russian charterers to cast their net even wider and to take delivery of vessels, say, passing Land's End, but a week or so ago these same charterers started inviting offers of tonnage on a timecharter basis with delivery mid-Pacific. No doubt this inquiry was intended to attract some of the tonnage in Eastern waters which was considering ballasting back for such cargoes as scrap from the U.S. Gulf to Japan or sugar from Cuba to the same destination. One vessel fixed on these lines last week was a Liberty taken with delivery passing Honolulu for the trip to the Black Sea via Cuba at 16s 6d per ton per month with charterers' option of a continuation with redelivery Nahodka or Singapore at 18s. As a matter of interest Honolulu is about 23 days' steaming from Havana for a Liberty, whereas Land's End is 17

days from the Cuban capital, so as regards distance there is not as much to choose between the two places of delivery as might be expected. The Eastern redelivery option is interesting because it indicates the likelihood that some of Russia's current Cuban sugar purchases will go to Nahodka as in previous years. Later last week the Russian charterers withdrew their timecharter inquiry but it was generally considered unlikely that they would remain out of the market for long.

The Freight Markets

Once again high rates were paid on the outward markets last week and charterers found owners in a difficult mood. There was a further improvement in the scrap rate from the United States East Coast to Japan and fixtures included the *Portaria*, 9,500 dwt, for cargo, 475,000 cu ft bale, from U.S. North of Hatteras at \$142,500 f.i.o., May loading. There was also an active demand for tonnage for heavy grain from the U.S. Gulf to Japan and fixtures included *Grecian Emblem* at \$12.50 free discharge, May 25/June 12, and *Ringulv* for a similar voyage at \$12 free discharge, July 1/25. Higher rates were also paid for sugar from Cuba and tonnage was known to have been fixed to South China at 122s 6d f.i.o. and free taxes, and to not north of Shanghai at 125s. At least two vessels were fixed for June/July loading with sugar from Cuba to Japan at \$15 f.i.o., free taxes.

The trans-Atlantic trades showed little change but fixtures included the 15,000-tons tanker G. C. Brovig with heavy grain from the Great Lakes, completing St Lawrence, to Antwerp, Rotterdam or Amsterdam at \$102,000 f.i.o., for prompt loading, and another tanker, the 30,000-tons Silver Spring, with heavy grain from the U.S. Gulf to Antwerp, Rotterdam or Amsterdam at \$104,500 f.i.o., five consecutive voyages commencing May 25/June 15.

On the River Plate market the tanker *Dogaressa* was fixed with 17,000 tons of grain from Up and Down River to Genoa at 55s, option Genoa and Naples at 56s 9d, June 20/July 5; the *Mary K*. takes heavy grain from Up River Plate completing Buenos Aires, to Tokyo/Moji range at 114s free discharge, clause 6 limited to 1,000 tons of bagged cargo, June 26/July 20. The South African market was quiet but in the early part of the week the *Alta* was reported fixed with iron ore from Durban to Kobe at 54s 6d f.i.o., July 5/31, and an October vessel was taken for bulk sugar from Mauritius to Montreal at 70s. There was little to report from Australia but a vessel was fixed with bulk barley ex bags from South Australia/Victoria to Italy including Ravenna at 95s, June 24/July 15.

On the North Pacific slightly higher rates were paid for wheat to Japan and fixtures included a Livanos vessel at \$7 free discharge, July 1/10. The King Charles, about 8,700 dwt for cargo, 574,000 cu ft bale, was fixed with lumber and general cargo from British Columbia to the U.K. at 92s 6d f.i.o., July 20/August 19. High rates were paid for outward fertiliser cargoes and fixtures included Atlantic Star from Savona or Priolo to Indonesia at 80s f.i.o., May 15/25.

On timecharter the Aegean Sun, 10,702 dwt, 479,000 cu ft bale, 10/10½ knots on 25/26 tons fuel oil, was fixed at the high rate of 21s per ton, delivery passing Gibraltar, redelivery Continent, one West or South West African round voyage, charterers' option second round voyage at 19s. 6d., May 12/15.

NEWS FROM OVERSEAS

From THE SHIPPING WORLD'S Own Correspondents

Japanese Protests to Russia

A STRONG PROTEST against Russian plans to start a Nakhodka-Tokyo and Yokohama passenger liner service is expected to be lodged by Japanese operators at a conference due to be held in Moscow late in June or early in July. The companies concerned are Kawasaki Kisen, Yamashita Kisen and Iino Kaiun, which operate a joint service on the Japan-Nakhodka route. Their sailings alternate with those of Russian vessels under an agreement signed in 1958. They contend that Soviet plans to start a passenger liner service violate this agreement, since they were announced without previous consultation with the Japanese firms. The Japanese Foreign Ministry also is said to feel that it is "not desirable" that Russia alone should open a passenger liner service on the route. Renewal of the current agreement was stated to be the main business of the forthcoming conference. In view of the expanding trade between the two countries, the proposals of the Japanese operators are expected to include increases in the sailing frequency and in freight rates, and a revision of the types of ships assigned.

The Japan Homeward Lumber Transportation Conference, a tramp cartel, and two major lumber shippers are reported to have agreed on an average increase of 7.8 per cent in freight rates on lumber from Siberia and Sakhalin to Japan carried during the 1961 fiscal year. Estimated lumber imports from the two regions for the year are 1.5 mn cu metres.

The Japan-West Africa Freight Conference notified contract shippers that the congestion surcharge for Monrovia, West Africa, has been reduced from the former 15 per cent to 5 per cent. The reduction took effect from May 1. The activities of outsiders on the Japan-Bangkok route are said to have prompted the Thailand-Japan Freight Conference to study the possibility of adopting a fidelity rebate system to stabilize services, Daido Kaiun reported plans to extend its New York cargo liner service to include calls at Borneo. No date was given for the extension. It was said to be the first instance of Borneo calls being included in such a Japanese service.

Expanding trade between Japan and China since the recent relaxation in China's stand on relations between the two countries is resulting in the allocation of more and more vessels to the Japan-China service. At least six are reported to be regularly engaged. The operators are listed as Yamashita Kisen, Nissho Kisen, Toho Kaiun and Daiichi Chuo. The largest vessel is of 2,578 dwt.

Israeli Port Development

A SPECIAL committee, appointed by the Israeli Minister of Transport, has allocated the contract for the construction of the Ashdod deep-sea harbour to a group comprising Solel-Boneh Ltd, Haifa, and four French construction firms headed by the Société Générale des Travaux Publiques. It is learned that seven foreign companies submitted bids ranging from \$30.3 mm to \$38.8 mm. The lowest bid came from the consortium that won the contract. Work, according to current reports, was scheduled to start in April this year and should be finished in the autumn of 1964. A daily average of 600 workers will be employed on the project, which—on completion—will be able to handle up to 2.5 mn tons of cargo annually. The docks will accommodate up to eight ocean-going ships, as well as small vessels.

The removal of some $1\frac{1}{2}$ mn cubic metres of sand which threaten to silt up the entrance of Haifa port will begin shortly. The work will be carried out jointly by

the British firm of Edward Nutall and the National Engineering Company, Haifa. For the development in the last four years of the port of Eilat, on the Gulf of Aqaba, the sum of I£4 mn (equal to about £800,000 sterling) has been laid out. This harbour—Israel's outlet to the Red Sea and the Indian Ocean—can now handle 250,000 tons of dry cargo (excluding oil) a year. In 1959-1960 traffic was over 140,000 tons, which was more than twice as much as in the preceding fiscal year. Minerals represented over one-third of that figure.

During the year another I£1 mn was invested, mainly for the completion of the southern jetty, for the building of a 180-metre lighter quay on the northern side, for a 1,000 sq metre warehouse, an office building, a gasoline station and a peripheral fence. Two tugs were acquired, one of which was equipped as a firefighter.

Change to Engineering

THE Mitsubishi Shipbuilding & Engineering Co Ltd has reported that extensive reorganisation has been carried out at its Nagasaki works. This is aimed at increasing general engineering work so that the ratio between income from this source and from shipbuilding will be 50:50. At present, it is 70:30 in favour of the shipbuilding side. The company also stated that it had signed licencing agreements with J. M. Voith GmbH, of West Germany, for the manufacture in Japan of Voith paper machines, and with Clark Bros, of the U.S.A., for the fabrication of compressors, and Research Cottrell Inc, another American company, for the manufacture of dust collectors.

Shorter Notes

THE JAPANESE GOVERNMENT has approved a foreign exchange allocation of \$26,615,200 to cover charter payments for foreign vessels during the first half (April-September) of the 1961 fiscal year. It was stated that \$17,904,000 of the total was for time-charter payments and the remaining \$8,711,000 for voyage charters. Estimates showed that on April 1 foreign ships under charter totalled 60, aggregating 680,000 dwt. This compared with 65 vessels totalling 710,000 dwt under charter on December 31, 1960, and 85 vessels totalling 933,000 dwt under charter in June last year.

At Morphou Bay, Cyprus, a new pyrites loading installation built by the Hellenic Mining Co Ltd was due to start working early this month. It was started some years ago, but work was held up for some time. The installation, which includes a conveyor belt on a bridge extending about 450 yards from the shore, is about one mile west of the Cyprus Mines Corporation anchorage and pier. There is a depth of 7 fathoms at the head.

A large bulbous projection fitted to the foot of the bow on the Inland Sea passenger liner Kurenai Maru by Mitsubishi Heavy Industries, Reorg., is expected to reduce bow wave resistance by nearly 10 per cent. This, in turn, is expected to increase the vessel's speed by half a knot for the same engine power, and enable fuel consumption to be cut by 15 per cent. The projection replaces a smaller one on the 2,928-grt liner, which is one of two sister ships built last year for the Inland Sea service of the Kansai Steamship Co.

The roof on the engine house of the lighthouse at Europa Point, Gibraltar, consists of three layers of Ruberoid asbestos based roofing, surfaced with Ruberdal asbestos/cement tiles. The building is subjected to high winds—force 10—and heavy rain in winter and is submerged in sea spray during high seas. Also, the summer temperature reaches 100 deg F in the shade. Ruberdal tiles protect the bitumen membranes from oxidation and the buffeting of breaking waves. In addition, by reflecting the sun's rays they provide greatly improved insulation.

United Molasses

STRONG FINANCIAL POSITION

THE thirty-fifth annual general meeting of The United Molasses Company Ltd will be held on June 6 in Lon-

The following is an extract from the circulated Statement by the Chairman, Mr G. W. Scott, C.B.E .: -

The gross profits of the Group for 1960 amount to £4,516,674, a reduction of £303,001 over the gross profits for 1959, and the net profits of the Group at £2,007,799 show a reduction over the previous year of approximately £182,000. These results are somewhat better than could be anticipated last year when I indicated the Group profits might well show a reduction from those of 1959.

It is recommended that the Ordinary Dividend be continued at the same rate, free of tax, as for 1959. Your Directors have decided once again to supplement the return to Ordinary Stockholders by recommending a Cash Distribution of 41/2d per Unit, not subject to income tax.

The financial position of the Company remains strong and the Balance Sheet indicates that Current Assets of £18,519,237 exceed Current Liabilities, Provisions, etc, by £12,116,496.

Shipping

Athel Line Limited .- The tanker freight market remained very depressed during 1960 apart from a sharp and unexpected rally in December which was short-lived. Today's level is the same as a year ago and there can be little prospect of any marked and lasting improvement whilst there continues to be a substantial surplus of tanker tonnage in the world.

New Tonnage.—The first of the two 19,000-tons tankers ordered in 1956 is expected to be delivered in May this vear and the delivery of the second vessel is still deferred.

Anchor Line Limited.—The six vessels engaged in the Indian and Pakistan run traded successfully throughout the year. Both the volume of cargo carried and the number of passengers transported in your Company's liners were well maintained and the level of profit earned was satisfactory, bearing in mind the depressed state of the general cargo market which prevailed.

Last year I mentioned the changes which were being made regarding the Atlantic run and that arrangements had been entered into with the Cunard Steam-Ship Company Limited to provide a vessel to operate a joint service on the Atlantic run from London, Le Havre and Glasgow to North American ports. Anchor Line's part of this service has been operated during the year by a vessel chartered by the Company pending delivery of the new 8,000-tons deadweight vessel Sidonia, designed specially for the new trade and due for delivery in the latter part of May of this year.

This major change in the Atlantic service has been amply justified and I am pleased to be able to state that a satisfactory profit has been earned this year against substantial losses incurred by the three vessels operating during 1959.

Future Prospects

We are facing a difficult year which is not easy to forecast, bearing in mind that the principal contributors to the profitability of the Group are molasses and shipping. Molasses trading has been unsettled by the political situation in the Caribbean which, aided by the continuing low tanker freight market, has made competitive conditions more difficult.

Prospects for shipping continue to be depressing with no evidence of the likelihood of a material improvement in either dry cargo or tanker freights. However, your Directors hope once again, barring any unforeseen occurrences, to be able to recommend dividends out of Revenue Profits for 1961 at the same net rate as for 1960.

Eagle Star Insurance

Sir Brian Mountain's Review

DURING the year we acquired a controlling interest in

the Navigators & General Insurance Company Limited.
A triennial Valuation of Current LIFE Funds releases £1,180,000 of profit to Shareholders, after taxation. Of this, £250,000 was transferred in 1958 and 1959 and the balance will come in three equal instalments. With-profit Deferred Pension-Annuities are, for the first time, benefiting from the complementary declarations of reversionary and interim bonuses to policyholders.

The consistency of profit in FIRE department is being influenced by multiplication of large industrial plants which can form an undivided fire risk. More perils are being included under Fire and "All-In" contracts and many policyholders received help from flood claims, particularly those retail traders whose Eagle Star "Shopkeepers' All-In' policies proved to be unique in covering stock and fixtures.

ACCIDENT department expands to such a degree that the diversity of its cover sometimes produces difficulty in obtaining sufficient risks to "make a book". Everything from holiday baggage to the largest dragline excavator can be covered.

MOTOR department continues to walk the tightrope, and the only effective remedy must be education in road sense and the encouragement of safe driving by selection and careful underwriting.

Improvement in MARINE department justifies a transfer to Profit and Loss, and AVIATION department strives to balance the desire of operators for lowest-cost cover with the need for underwriters to provide against heavy claims on increasing number of high-valued jet aircraft.

Carry forward increases by £346,681 to £2,424,531: dividend stepped up to 2s 9d (with 2s final payable 1 July 1961) per share against 2s 3d per share last year: Shareholders' Meeting London 1 June 1961.

The American Society of Naval Architects & Marine Engineers has published Technical and Research Bulletin No 3-9 Report of Task Group on Service Power Allowances. This report analyses the operation of a number of ships in several services in terms of their speed "made good" and their service power allowances. In addition to its specific value concerning the question of the required power margins, the report incorporates a study made by Messrs Numata and Van Mater of Davidson Laboratory at Stevens Institute of Technology, Hoboken, N.J., setting out information concerning service speed performance at sea as compared with trial performance, with a record of shaft horsepower expended in each case. The Power Allowance Task Group, which prepared the report, was composed of D. C. MacMillan, president, George G. Sharp, Inc.; Hollinshead deLuce, Bethlehem Steel Company, Shipbuilding Division; H. R. Glennon, Jr, vice-president, Moore-McCormack Lines; and Earl S. Shulters of the Maritime Administration.

Pay, Productivity and Peace

THE WAGE STRUCTURE IN THE SHIPBUILDING INDUSTRY

By Alan Beaton

It is generally accepted that the British shipbuilding industry is going through a critical phase—perhaps in some ways as menacing in its impact as the lean years between the two world wars. One cannot find much consolation in the fact that world shipbuilding capacity is currently more than twice the estimated demand over the next ten years. Much of this capacity is of recent origin either in countries which previously bought their ships from the United Kingdom, or arises as a result of increased output from existing yards, reorganised and equipped with up-to-date machinery.

It is for this reason that British shipbuilders must undertake some radical rethinking if they are to meet the formidable competition now provided by foreigners, and if they are to secure a sufficiently large share of available orders to keep their yards and those who work in them fully occupied.

It is frequently said that superior workmanship and perhaps better design will always give the British product a favourable "edge". Experience in recent years, however, shows that foreign yards, especially in Japan and Germany, Scandinavia and Holland—which are geared to mass-producing ships—have too often been more successful in getting the orders. The Norwegians, who operate one of the world's largest mercantile fleets, have ordered over 50 new vessels since the beginning of this year. While Scandinavia, Germany, Holland, France and even Spain have shared in this business, not a single vessel has been ordered from Britain. The largest tanker flying the British flag was built in Nagasaki and recently the largest British trawler was launched from a German yard.

Why is it that foreign yards can succeed where apparently we fail? Why is it that British yards, manned by the most skilled and experienced labour in the world, have empty berths?

Prices and Delivery

The basic reasons are to be found in lower prices and quick deliveries. These are now the major factors in awarding tenders and few British yards are yet prepared to guarantee fixed delivery dates and prices. Why is this, and why is productivity in British yards—the key to low-cost shipbuilding—lagging behind some of the Continental yards?

Many in the industry would agree that there is no longer the differential in technical skill and performance that once there was, but it is in the field of labour relations that Britain is well behind her Continental competitors: labour relations which are still bedevilled by conditions of employment completely out of date when measured by today's standards.

Typical of this condition is the wages structure which is still applied in far too many yards. When one considers that wages represent a significant proportion of an average vessel's price, the importance of a "rational" system which helps to eliminate strikes, delays and goslows, becomes evident. It is an apparent truth that the longer a ship takes to build, the higher the price and the lower the chance of securing further orders. Moreover, poor labour relations give British yards a bad name (whether justified or not) for reliability.

Most yards in this country operate a dual payment system which embraces both day work and piece work.



MR ALAN BEATON is a director of Personnel Administration Ltd

The origin of some of the piecework prices can be found in the last century and despite periodic adjustments they have no relevance whatever to the new methods of shipbuilding or the comparative skills required from the different tradesmen who build a ship. Working methods have changed over the years—radically so in those yards which have been re-equipped for welded prefabrication. There has been no major change, however, in the methods or basis of payment, despite a succession of strikes and stoppages attributable at least in part to earnings anomalies and seeming inequities in the payment system. Some tradesmen traditionally on piecework consistently take home a larger pay packet than colleagues in other trades where day-rate working is the accepted (and only feasible) practice.

Determining Piecework Rates

In these conditions, it is not surprising that there is dissatisfaction, especially as a difference in the rate of working may be difficult to observe. Unfortunately, piecework prices are rarely determined by scientific measurement or work study, and "negotiated" times are hardly famous for their accuracy. It is also true that the very nature of shipbuilding, where one vessel is rarely identical with another, is hardly conducive to the use of work study on all operations, except by incurring very high administrative costs which cannot always be justified by the benefit secured. Thus it is probably uneconomic to use work study techniques to determine time standards for all operations involved in the construction of a vessel—at least sufficiently accurately to permit their use as a basis for the calculation of men's wages.

A revised payment structure must therefore take this factor into account, and while there are certainly a number of jobs which lend themselves to work measurement, there are at least an equal number where an alternative must be found if one is to avoid anomalies and operative ill will

There are always more ways of killing the cat than drowning it, and that is why my own company recently offered to carry out a complete review of the wages system—free of charge—on Clydeside. Why Clydeside, and not Tyneside or the Mersey? We chose Clydeside because it is by far the largest shipbuilding area in Britain, launching roughly 30 per cent of the national output. It also has a wide range of shipyards from the smallest, building tugs and barges, to the largest, capable of building superliners.

The problems facing Clydeside are typical of those facing the whole of British shipbuilding, and it was thought and believed that a pilot scheme, successfully operated there, would demonstrate the value of such an approach to the industry as a whole. Moreover, the

dangers and difficulties facing shipbuilding are perhaps more evident there than anywhere else in the United Kingdom.

In a country where unemployment is consistently twice the national average, the shipbuilding labour force has fallen by over 4,000 men in the past three years—and the order book has been halved in the same period. Last year it was slightly better than 1958 and 1959, but the 23 Clyde yards booked sufficient orders to keep them going for only five months and these orders were distributed unevenly. At the moment nearly one-third of all the berths on the river are empty, and some yards have only been saved from a total standstill by last minute orders.

Unemployment is higher in shipbuilding than in any other industry on the Clyde (except perhaps building during the winter). No wonder this state of affairs breeds fear, which in turn leads to eruptions of bad temper on both sides, not to mention lack of cooperation and sectarian self-interest—a situation which cannot make the industry more competitive.

This basic fear of the future, which overshadows all negotiations, could be virtually eliminated and a new confidence engendered, based on mutual interest, if the wages structure were brought up to date, made more realistic and coupled with a measure of security altogether absent in existing conditions.

The Clyde Shipbuilders' Association has, at least for the time being, turned down the offer of a wages review. The main reason advanced was that "streamlining" was impossible, bearing in mind the large number of trades and different operating conditions in each yard. There was also a hint that shipbuilders—employers and unions—were the only ones qualified to carry out such a fundamental revision of employment conditions—if it were indeed eventually found necessary.

Job Evaluation

During discussions with the shipbuilders, it was apparent that a certain amount of confusion over job evaluation and work study still exists in the minds of some managements and some trade union officials. Work study is still taboo to some of the shipbuilding unions, especially the Boilermakers' Society, which caters for approximately one-third of all shipyard workers. The general secretary of the Boilermakers' Society, however, strenuously denies that his members refuse to cooperate in methods which will increase productivity.

Perhaps then the confusion arises from the association of work study and incentive schemes. There is no fundamental need for these two quite separate subjects to be associated, and if one interprets the term "work study" to mean "method study", unconnected with payment in any shape or form, then there might be a greater willingness to accept this technique as a means for determining the easiest way of carrying out a job. In most cases this is also the cheapest

Job evaluation, on the other hand, is something entirely different. In a sense, every negotiation about rates of pay (if one excludes cost of living rises) is concerned with job evaluation. It is merely a term applied to a rational as opposed to an empirical approach, whereby a job is related to other jobs in terms of its relative worth as determined by the skills involved and the conditions under which the work is carried out.

A rational scale of relative job values could form the basis of a wages review, with no connection whatsoever with work study, which is an entirely different technique. Once the climate of labour relations within the industry is improved by eliminating obvious causes of friction, there will, I am sure, be a much greater readiness on the part of the unions to look again at method study and

other techniques which help to reduce costs and thereby provide an opportunity for increased earnings.

At the moment most shipbuilders agree that productivity is not as good as it should be, and that it must be improved if the industry is to survive in its present form. Quite a number would also agree that the crazy patchwork of wage rates at present in use has a direct and undesirable impact on both productivity and good labour relations.

There are those who say that consultants or any other outside body are not perhaps the right people to carry out a wages review in a complicated industry like shipbuilding. Surely the more complicated the industry the more need there is for expertise in designing a rational and acceptable wages structure.

Many other industries have already adopted this approach and in Scotland alone the tweed, knitwear, boots and shoes, jute and sugar refining industries all enjoy a wages structure based on job evaluation, and have incidentally a fine record of good labour/management relations. Perhaps even more pertinent, however, is the fact that the principles of job evaluation have been, and are being, applied in the shipyards of Scandinavia, Holland and Germany, all of which have stolen a march on the United Kingdom in turning out mass-produced ships more quickly and cheaply.

There is no reason whatever why the same approach should not be tried here. Everyone agrees that there should be a logical and fair relationship of earnings between one job and another. If this relationship is determined in a rational manner, existing anomalies can be eliminated and thereafter wages can go up as a proportion of increased productivity. A new spirit of confidence would result and change the whole atmosphere of fear and suspicion which now pervades the shipyards, not only on the Clyde but indeed in other parts of the country.

Far from it being a disadvantage to have "outsiders" carry out a preliminary review, there is a positive advantage in having such a scheme prepared by completely impartial and objective parties. To some extent the industry is a victim of its own history and it is doubtful whether the inbred suspicion of many years would permit any radical change in existing practices from within. Moreover, even assuming that job evaluation is accepted in principle by all parties, it is doubtful whether the new levels could be introduced without some cases of hardship. If anomalies are to be eliminated, however, this must be done and here again outside expertise based on past experience might be invaluable.

Fear of Redundancy

So far I have discussed wage anomalies and productivity. Some readers might already be asking: "Will not higher productivity lead to redundancy and a new wave of fear among the shipyard workers which would invalidate the beneficial effect of a wage review?" My answer to this is that redundancy is much more likely if orders run out and people have to be sacked because there is no work for them. In the long term this must surely be the fundamental answer. However, there is bound to be a period of adjustment and that is why the wages review must be accompanied by a new "code of practice" covering general conditions of employment. code, which has already been developed for the printing industry, might well be used as a starting point for negotiation between employers and the trade unions. In this respect surely it is completely anomalous in this year of grace that shipyard workers can be dismissed at a few hours' notice, even after many years of continuous employment. Against this background, it is not surprising

(Continued on page 462)



Cargo Vessel "Montrose"

FIRST N.E.M.-GÖTAVERKEN DIESEL ENGINE INSTALLATION

THE FIRST ship to be powered by a British-built Götaverken diesel engine is now at sea. This vessel, the *Montrose*, 8,590 dwt, has been built by Bartram & Sons Ltd, Sunderland, for Buries Markes Ltd, London: the machinery has been built by the North Eastern Marine Engineering Co Ltd, Wallsend. Details of this engine were given in The Shipping World of 15 February 1961, shortly after it had been on test. It is understood that there are a further six N.E.M.-Götaverken engines on order to date. During sea trials off the North East Coast the *Montrose* attained a mean speed of 17.27 knots.

The principal particulars of the Montrose are as follows:—

N3.		
Length o.a	***	440ft
Length b.p		420ft
Breadth moulded		58ft 6in
Depth moulded to second decl	k	26ft 9in
Depth moulded to upper deck		35ft 9in
Draught (closed shelter deck)		27ft 4in
Deadweight (closed)		8,950 tons
Deadweight (open)	***	7,250 tons
Machinery output	***	6,300 bhp
Service speed		16 knots

The Montrose has been designed for operation as an open or closed shelterdeck vessel. Two complete decks extend over the length of the ship, while a third deck is arranged in the forward holds. In common with all recently-built Bartram ships, the new ship has been built with the aid of optical marking equipment and Monopol automatic plate cutting machinery. All steel was shotblasted before installation.

Subdivision is effected by seven transverse watertight bulkheads which are carried up to the weather deck. Troughed plate construction is employed for all but the peak bulkheads. There are three holds, with upper and lower tweendecks forward of the machinery space; and one hold and deep tank with upper tweendecks aft. The holds are served by hatchways of ample size. On the weather deck, hatch covers of Götaverken patent hydraulic steel type are fitted. No 2 hatch on the second deck has a mechanical hatch cover of similar manufacture. Elsewhere

the covers are of wood. All tweendeck hatches are flush.

The deep tank is longitudinally subdivided into port, centre and starboard compartments and is fitted for the bulk carriage of tallow, water ballast or dry cargo. Extend-

bulk carriage of tallow, water ballast or dry cargo. Extending aft from the fore peak bulkhead, the cellular double bottom is longitudinally framed. Eight tanks are arranged for fuel oil, diesel oil, fresh and feed water and water ballast

Novel Grain Feeders

Two refrigerated cargo chambers are arranged on each side in the tweendecks forward of the engine room. The associated refrigerating machinery is contiguous with the engine room and centrally situated. A novel arrangement for the carriage of grain and similar cargoes in bulk is the provision of permanent grain feeders through the tweendecks, These are fitted at the bulkheads and are arranged in conjunction with special feeder hatches in each deck. When carrying general cargo, portable shifting boards at the ends of the feeders only are dismantled, and the feeder becomes available for cargo. Thus the hatchways are completely unobstructed and erection time and costs are substantially reduced.

Cargo handling equipment includes ten 5-tons derricks and four 10-tons derricks; in association with ten 3,000-kg, and four 5,000-kg electrically-operated cargo winches of Thos. B. Thrige manufacture. Anchors and cables are handled by a Thrige electric windlass, while after moorings have a 5,000-kg electric warping winch. The latter has a cable lifter to handle the stern anchor and cable. The steering gear comprises a Hastie two-ram electric hydraulic unit with Hastie-Brown type telemotor control.

The propelling machinery in the *Montrose* is a five-cylinder two-stroke turbocharged Götaverken diesel engine type DM 760/1500-VGS35U having a designed continuous rating of 6,300 bhp at 112 rpm with a mean indicated pressure of 125 lb/sq in. In service the engine rating is 5,650 bhp. The turbocharger is of Napier manufacture and a Serck air cooler has been fitted. The engine is designed to burn heavy fuel.

Cable Repair Ship "Retriever"



A NEW cable repair ship has been built by Cammell Laird (Shipbuilders & Engineers) Ltd, for Cable & Wireless Ltd, London. This vessel, the Retriever, 2,750 dwt, is the first of the Cable & Wireless ships to be designed and constructed for the recovery and overboarding of the new co-axial type telephone cables with submerged repeaters inserted. She will replace one of the company's fleet of seven ships. The last vessel to be built for Cable & Wireless was the Recorder, of 2,500 dwt (SW, 25.8.54), which has an operating range of 10,000 miles and a coiling capacity of about 21,000 cu ft, which is equivalent to about 420 miles of deep sea cable. The new ship has a speed of 15 knots and is faster than any other ship in the fleet. Her operating range is 8,000 miles and her sea endurance seven weeks. A twin-screw ship with dieselelectric propulsion, she has a bow propeller of Voith-Schneider type in a bow tunnel.

The Retriever is one of a number of new cable ships currently being built in European shipyards, inspired partly by the demands of the new telephone cables which are now being laid. In British yards, the new Post Office cable ship Alert is on the point of completion at the yard of the Fairfield Shipbuilding & Engineering Co Ltd, while at the beginning of this year Cable & Wireless Ltd announced that they had placed a further order with Cammell Laird & Co (Shipbuilders & Engineers) Ltd for their first cable layer. This will be a diesel-electric vessel of about 8,000 grt which will cost about £1,900,000, and will be the first British cable-laying ship designed from the start to lay and handle modern types of deep-sea communication cables with repeaters, including the kind that are to be used in the 28,000-miles Commonwealth round-the-world telephone cable. She will have a range

CAMMELL LAIRD-BUILT VESSEL FOR CABLE & WIRELESS

LEFT: A bow view of the ship showing the bow baulks with triple sheaves.

The anchors are well recessed

of about 8,000 miles and a maximum speed of 16 knots. The first work to be undertaken by the *Retriever* is in fact not the repairing but the laying of cable, as she is due to sail from Southampton towards the end of this month to lay the shore ends of a new telephone cable between New York and Bermuda which is being financed jointly by Cable & Wireless and the American Telephone & Telegraph Company. After this work the ship is likely to be based on Gibraltar for a year, working on repairs, and it is expected that she will finally be based on Suva in the Fiji Islands—the first of the company's ships to be stationed there.

The New York-Bermuda cable will have the British rigid-type repeaters in it, and these will be laid by the Retriever. However, she is not ideal for laying, as distinct from repairing, cables with these repeaters: it is necessary to unwind the cable completely from the cable drums whenever a repeater is laid, in contrast to the bypass method used with the five-wheel laying gear at present fitted in the big Post Office cable ship Monarch (SW. 29.3.61), which is laying the new telephone cable between Britain and Canada.

The principal particulars of the Retriever are as follows:—

			58	
Length o.a	***		144	368ft
Length b.p				330ft
Breadth mou'ded				47ft 6in
Depth moulded to	upper	deck		29ft 6in
Draught		***	***	19ft
Deadweight	***	***		2,750 dwt
Gross tonnage	+++			4,000 grt
Net tonnage	***			2,200 nrt
Machinery output	***		***	3,300 shp
Speed	***			15 knots
Operating range	2.2.4	***	***	8,000 miles
Cable coiling capa	city			21.000 cu ft



The petty officers' mess. The window at the rear opens on to the accommodation alleyway. Hi-Pres air conditioning units can be seen



Speed of erection, and lower maintenance costs, are important advantages gained by using these modern extruded aluminium-alloy sections for ships divisional panels. Sections can be designed to take any particular thickness of panelling.

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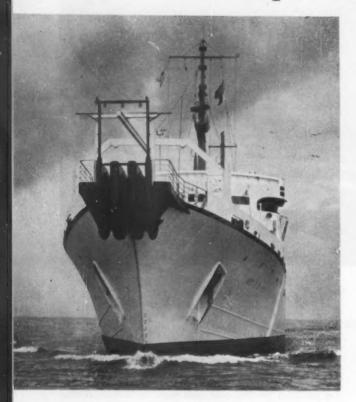
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Cable Repair Ship "Retriever"



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The principal particulars of the Retriever are as follows:—

13.			G .	
Length o.a	4.00			368ft
Length b.p				330ft
Breadth mou'ded				47ft 6in
Depth moulded to	upper	deck	***	29ft 6in
Draught		***		19ft
Deadweight			***	2,750 dwt
Gross tonnage			***	4,000 grt
Net tonnage				2,200 nrt
Machinery output				3,300 shp
Speed				15 knots
Operating range				8,000 miles
Cable coiling capa	city			21.000 cu ft



The petty officers' mess. The window at the rear opens on to the accommodation alleyway. Hi-Pres air conditioning units can be seen



Speed of erection, and lower maintenance costs, are important advantages gained by using these modern extruded aluminium-alloy sections for ships divisional panels. Sections can be designed to take any particular thickness of panelling.

With long and varied experience in extrusions, Southern

Forge place extensive large-scale manufacturing facilities at the service of users. Personal technical advice and assistance are available on request.

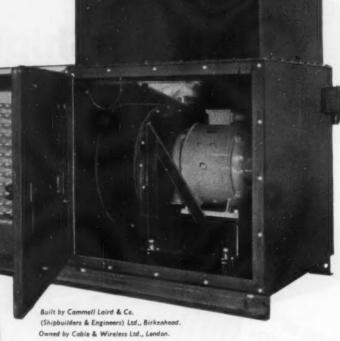
Southern Forge LTD

MEADFIELD ROAD · LANGLEY · BUCKS
Telephone: LANGLEY 301

ALUMINIUM AND ALUMINIUM ALLOY EXTRUSIONS TUBES AND FORGINGS

LATEST, GREATEST AIR CONDITIONING SYSTEM -NOW ON BRITAIN'S MOST MODERN SHIP









Colvinaire Hi-Pres Cabinet

C.S. RETRIEVER fully Air Conditioned throughout by COLVINAIRE.

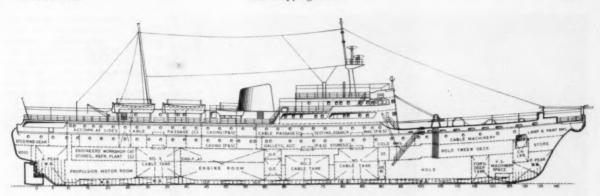
This is a high velocity system with re-heating and re-cooling in each cabin. Here is the first Cable Ship where each person can regulate his own Air Conditioning by means of individual control. As the vessel will be operating in Arctic and Tropical waters, provision has been made for all extremes of temperatures. This system operates on full fresh air with recirculation taking place in the Cabinets.

Colvinaire are proud to be associated with this fine vessel.

Colvinaire Hi-Pres



COLVINAIRE LTD., TEAM VALLEY, GATESHEAD, 11.



Sectional profile of the "Retriever"

The ship is almost entirely of welded construction, the seams and butts of the shell being flush. During construction extensive use was made of modern prefabrication methods. All plating was shot-blasted prior to erection, and large areas of the shell plating and internal steelwork were protected from corrosion by having a coat of priming paint applied immediately after shot blasting. Special consideration has been given to the trim of the vessel when laying cables, and in order to obtain the best balance possible the diesel engine room is located aft of amidships and the electric propulsion motor room as far aft as possible, while two cable tanks are fitted in the forward part of the ship and the third between the engine and propulsion motor rooms.

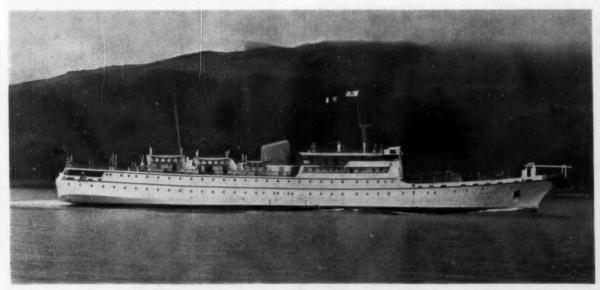
The whole of the cable gear and its associated equipment has been designed and supplied by Johnson & Phillips Ltd, Charlton, and is the first set of an entirely new type of gear. It is of interest to note that it was to manufacture marine cable laying gear and ancillary equipment that this firm was founded in 1785. The Retriever's cable drums, lead sheaves and bow sheaves are all of 7ft diameter.

The cable machinery is arranged on the main and upper decks forward of the bridge. It is electro-hydraulically operated and the port and starboard cable gears are driven by Vickers-Armstrongs 175-hp electro-hydraulic

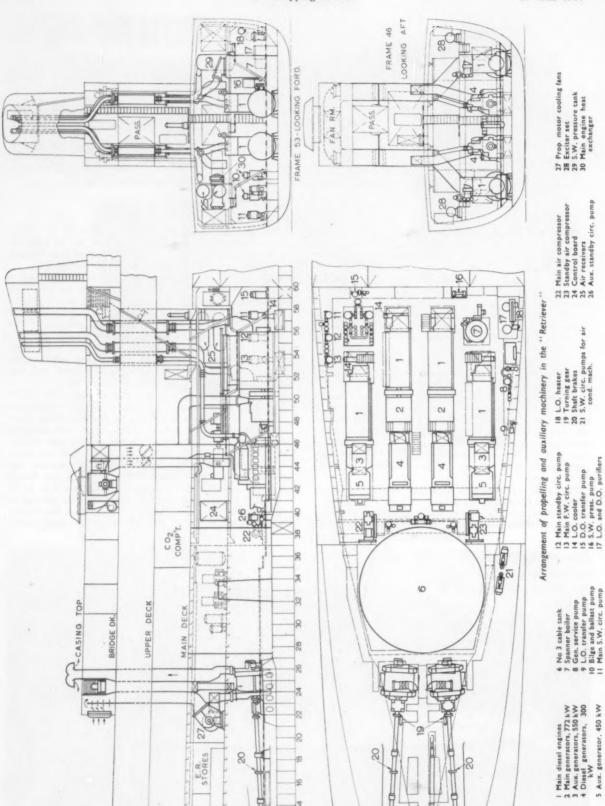
units, each giving a lift of 30 tons at $\frac{1}{2}$ knot, 15 tons at 1 knot and $\frac{7}{2}$ tons at 2 knots. Cable can be paid out at a speed of 8 knots. It can be lowered into the sea over either of the bow sheaves or over the stern.

The nature of the duties of a cable ship involves a large crew, and the Retriever has a crew of 105. The accommodation is of an excellent standard, and is notable both for the fact that it is air-conditioned throughout, and also for the adoption of ship's side alleyways. The Retriever is the first of the company's ships to be built with complete air conditioning, though it is being fitted retrospectively in older ships: the system used in the Retriever is the Hi-Pres high-velocity system, and this was supplied and installed by Colvinaire Ltd.

The use of alleyways along the ship's side, with cabins opening out on to the alleyways, is an idea which was adopted by Mr Edmund Watts in the Weybridge class of Watts, Watts & Co Ltd. These ships were designed for the North Atlantic, where cabin scuttles can seldom be opened for a good part of the year. With an all-air conditioned ship scuttles equally cannot be opened, and the removing of the cabins from the ship's side brings with it a number of advantages. The cabins tend to be of better shape: the effect of minor shipside damage is reduced and repairs facilitated: no sun strikes the accommodation spaces, and so the demand for air conditioning



The ship on trials. The chine aft is noticeable. The shape of the funnel has since been altered, the Tyfon syrens being moved up into a square extension sited above the funnel at its forward end



2

ESCAPE HATCH

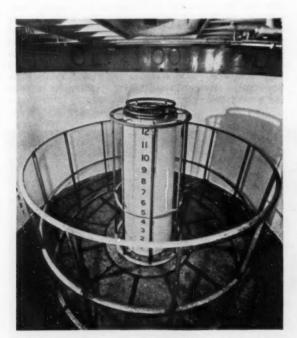
The control console occupies the centre of the wheelhouse. The Chadburn desk-mounted engine-room telegraphs are at the near end, and the Brown steering control in the centre. The car-type steering wheel is the control for the Voith-Schneider bow propeller. Along the rear bulkhead are three Kelvin-Hughes echo sounders, and in the far corner are one of the Decca radar displays and the Loran

capacity is somewhat reduced. For a cable ship, however, one of the main reasons is the better privacy afforded. The centre alleyway in the ship is essentially a working space, giving access to the tanks and foreand-aft, and in old cable ships the cabins opened straight on to this alleyway.

In view of the time that cable ships are away from British waters they are com-

monly manned by local crews. The Retriever has Spanish deck and engineroom crew at present, but if, for example, she were based on Singapore she would have Chinese engineroom crew and Malayan deck crew and stewards. Two crew galleys are therefore provided in order to allow for different nationalities or religions.

Despite the small size of the ship, the accommodation is generous. The captain, chief engineer and chief electrician (chief cable engineer) have private suites on the bridge deck consisting of dayroom, bedroom and toilet. A two-berth cable representatives' cabin is also fitted on this deck. The radio operator has a cabin next to the radio room on the navigating bridge deck. The remain-



Inside one of the cable tanks. The annular division allows two different types of cable to be carried in one tank



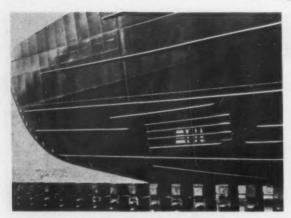
ing officers' cabins are on the upper deck. The chief officer, 2nd engineer and 2nd electrician have suites consisting of dayroom and bedroom, the other cabins being generally single-berth rooms. Single-berth petty officers' and leading hands' rooms are on the main deck, together with two-berth rooms for ratings. The accommodation bulkheads are designed to reduce fire hazard, being of Marinite supported on steel grounds and faced with Formica. The framing round and between the Marinite panels consists of aluminium alloy partitioning sections. These sections are extrusions designed for the purpose, and were supplied by Southern Forge Ltd, Langley, Bucks. They have been anodised to a silver colour.

The four lifeboats, launch and working cutter are of glass-fibre construction of Woodnutt & Company's design, built by Lambie & Co. The engines in the launch, motor lifeboat and working cutter are air-cooled Parsons/Armstrong Siddeley diesel engines. The launch is suitable for towing purposes and has a 33-hp engine. It is fitted with a Ferrograph echo sounder supplied by Marconi. Boat davits are of the Welin-Maclachlan single pivot torque type, with built-in electric motors having no sheaves or wire falls leading along the decks or scuppers. Several Dunlop inflatable life rafts are carried in addition to the normal life saving appliances required by the Ministry of Transport regulations.

Navigational Equipment

As might be expected, navigational equipment is extensive. It includes one shallow water and two deep water echo sounder sets by Kelvin & Hughes Ltd, a Chernikeeff submerged log, a side-streaming log, a Lucas sounding machine, two Decca radar sets, one of which is of the true-motion type, Decca Navigator, Decca plotter, Loran, Mufax weather recorder and a direction finder. Provision is made for the future fitting of Dectra. For use on cable operations, two range finders are fitted on the wheelhouse top.

An Arma-Brown gyro compass is installed in the chartroom with repeaters at wheelhouse, port and starboard top bridge, wings and bow baulks. Brown auto-electric steering control is fitted together with an electric remote control steering unit at the bow baulks for use on cable work. The standard compass is a Hezzanith projector



The aperture in the bows for the Brown-Voith Schneider bow propeller

compass with fore and aft reading on the projector in the wheelhouse.

The central feature of the wheelhouse is a large control console, containing the steering control and a great deal of other equipment. Next to the main steering control is a car-type steering wheel which is used to control the Voith-Schneider bow propeller (this control is also duplicated in the bows of the ship).

An extensive radio system is fitted, with the radio room on the navigating bridge deck. The installation is by Marconi, and includes single side-band Globespan and Reliance transmitters and HR 22, Mercury and Electra receivers. Three sets of Walkie-Talkie V.H.F. equipment are carried. Forward of the radio room is the chart room, and this is fitted with a special table for making charts in addition to the normal furniture.

Propelling Machinery

The propelling machinery comprises an arrangement of four diesel engines direct-coupled to electric generators which supply electricity at a total of 750 volts DC to two propulsion motors. This multi-diesel-electric plant, which operates on the modified Ward-Leonard system of control, has been supplied by the English Electric Co Ltd. All of the four main diesel engines are turbocharged, and they have five cylinders each. Two are coupled to 550-kW generators and two to 770-kW generators, each of 375 volts DC rating. These generators supply power to two electric propulsion motors operating at 750 volts DC

and running at a maximum speed of 144 rpm, one on each propeller shaft.

The propelling machinery is designed to give a total ahead output of 3,300 shp at not more than 144 rpm, with a total astern power of 80 per cent of the ahead output. In addition to driving the main propulsion generators, the port and starboard diesel engines will drive a 450-kW 220-volts DC generator in tandem, and this will obviate the need for running a separate auxiliary diesel

generator when the vessel is at sea. For supplying electricity when the vessel is in harbour there are two six-cylinder four-stroke pressure-charged diesel engines, each driving a 300-kW 220-volts DC generator, one working and one standby.

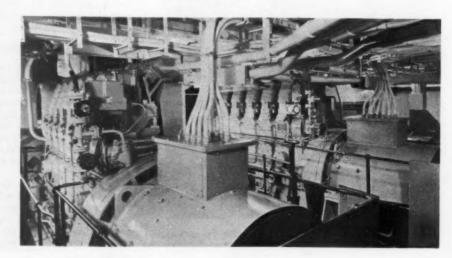
Direct control of the propulsion motors is arranged, through interlocking switches, from the wheelhouse, bow baulks or engine room, as required, by means of Chadburn six-step electric synchro-step telegraphs. For bridge and bow baulk operation when the vessel is on cable work, a vernier control is installed at each position to enable the operator to obtain any speed between those of the telegraph steps.

When on cable work it is essential that the ship shall be extremely manoeuvrable, and to ensure this a Brown-Voith Schneider transverse propulsion unit has been installed in an athwartships tunnel below the light load line immediately abaft the fore peak. This can be controlled from the bridge or the bow baulks. Such a unit



Refrigerating equipment for the air conditioning is fitted into the space abreast No 3 cable tank. The compressors are by J. & E. Hall

will be very helpful in maintaining the ship's heading with cable at the bows, picking up or streaming buoys and when manoeuvring into harbour berths and alongside quays. It may also be used to steer the vessel when going astern at reduced speeds on cable work, should it be necessary to pay out certain types of cable over the bows in this manner in order to keep the cable clear of the vessel's hull.



The two auxiliary generators. Space in the engine room is necessarily somewhat restricted

Delays at Feltham

LESS PRESSURE ON N.P.L. TANK FACILITIES

THE REPORT for 1960 of the National Physical Laboratory, which has been published, reveals that although the new Ship Hydrodynamics Laboratory at Feltham was opened by the Duke of Edinburgh in October 1959, and it had been hoped that the facilities would be in full use early in 1960, this hope was not fulfilled. Various problems arose in the commissioning of all the facilities, and it was only on November 4 that the carriage and wavemakers were handed over to the Division, and then only with certain reservations regarding performance. Since then acceptance and calibration tests have been going on and experience gained in the use of the tank, and a number of projects have been run both for industry and as part of the seakeeping research programme.

The propulsion system for the towing carriage, and the control system for the main wavemaker, both represent fairly complex high-gain servo systems and it proved to be a major problem to get the electronic control fully aligned and adjusted to the high precision required by the specification. The main difficulties were, however, resolved and S.H.L. agreed to accept an interim hand-over of the carriage and wavemaker on November 4. The basis of this was that final adjustments to the carriage could be carried out within the following weeks to suit the convenience of the S.H.L. test programme. The wavemaker would, at this stage, generate a wave of about 22in height using only two of the four available pump sets and the decision as to whether the remaining two pump sets and the associated control gear should be commissioned in order to bring the wave height up to the specified 24in rested with S.H.L.

The new water tunnel was still in the hands of the contractors at the end of 1960, and it was not available for use by the Division during the year.

As a consequence of this situation, the major part of the experimental work was concentrated at the Teddington part of the Division. This was concerned largely with investigations for industry and research work for hull resistance and propulsion in calm water. Of the research work, a large proportion was sponsored by the British Shipbuilding Research Association, and ship-model correlation was a joint work between the B.S.R.A. and the N.P.L. There has also been a certain amount of advisory work which has included advice on hull forms for new designs, estimating machinery powers required from preliminary design particulars, and examining and commenting on ship trial results.

Less Demand from Industry

In 1959 there was a substantial drop in the demand from industry, and this continued until March 1960. During the second half of the period under review, however, this demand increased, but there is no "waiting list" and investigations for the design of new vessels can usually be started immediately. This means that initial resistance experiments can be run about three weeks after receiving the lines plan and design particulars. Propulsion tests can be made within about six weeks of receiving the propeller drawing, or about one month after the resistance experiments if a standard propeller is used.

The research programme remained in general the same as the revised version adopted in 1958. The continued lull in the demand for merchant ship commercial tests enabled the research work to be continued at a higher level, as in 1959, and once again the British Shipbuilding Research Association was of great assistance in increasing its programme at the Laboratory.

There were a number of discussions with the National Research Development Corporation and the Ministry of Aviation with a view to implementing a basic research programme in the Division on ground effect machines, and this has now come to fruition. The funds made available are being used to hire additional staff, so that the general work of the Division in the ship field will not be affected.

Seagoing Qualities of Ships

In 1960 research in this field continued on the lines described in the report for 1959. The work is divided into three main parts, namely, the investigation of full-scale seagoing conditions, the development of methods for simulating these conditions in the tank, and the fundamental study of ship and model performance in waves.

A major part of the effort was devoted to the investigation of full-scale seagoing conditions and in particular to the conduct and analysis of full-scale ship motion trials. These trials have been carried out as a cooperative effort by the British Shipbuilding Research Association, the National Institute of Oceanography, the Admiralty Experiment Works, Haslar and the National Physical Laboratory. In the course of the year the analysis of the wave and ship motion records from the trials on OWS Weather Reporter carried out in September 1959 was completed by N.P.L., and this work is described in a series of four Ship Division Reports. In addition, three further trials have been carried out on the Cairndhu sailing to Canada and back. A start has been made on the analysis of these trials, and a DEUCE programme for analysing directional buoy records at N.P.L. is also being developed.

The survey of sea states mentioned in the 1959 report continued with a change of emphasis. Importance is now being attached to the collection of statistical information about sea conditions on a systematic basis covering the principal shipping routes of the world. A plan for analysing the extensive wave and wind data collected by the Meteorological Office from voluntary observer ships has been initiated, and a scheme for data collection from trawlers on the fishing grounds has been arranged in collaboration with the White Fish Authority.

SETTLEMENT OF SEAMEN'S WAGE CLAIM

A settlement was reached last week between the National Union of Seamen and the shipowners' representatives on the Union's claim for improvements in conditions of service of ratings on board British merchant ships. The main features of the settlement are that the compensatory leave of one day for each Sunday spent at sea is retained; the compensatory leave of one-half day for a Saturday afternoon spent at sea will be compounded by a flat increase in basic pay of approximately 5 per cent; and that overtime will be paid for hours worked whether at sea or in port in excess of eight per day (Monday to Friday) and four on Saturday morning. All hours worked on Saturday afternoon and Sunday will rank for overtime.

For those ratings in the catering department who receive consolidated compensation in lieu of overtime there is to be an additional compensation of three days' pay per month. Night watchmen's hours and overtime remuneration are to be the same as for other ratings. The special payment of 10s per month to holders of an A.B.'s Certificate will be increased to £1. For those ratings holding both an Efficient Deckhand's Certificate and a Lifeboatman's Certificate a new payment will be introduced of 10s per month. Discussions with the officers' societies on their claims will be continued this week.

Oil Topics

OIL AT EUROPOORT

ROTTERDAM has for long been Europe's foremost oil port, and the retention of this position will be greatly helped by the big new harbour extension-Europoort-where several tankers, with capacities ranging up to about 85,000 dwt, have called in recent weeks. The new port facilities on the southern bank of the Nieuwe Maas, opposite the Hook of Holland, are designed to provide all the necessary facilities for covering Western Europe's rapidly growing demand for oil and other goods. Before 1964 a harbour entrance direct on the North Sea will be built and more sites will become available; to receive 100,000-dwt tankers with their draught of 48ft the depth of the harbour will have to be at least 49ft below normal low tide or 54ft below normal high tide. Europoort follows upon the execution of the Botlek Plan which provides 2,075 acres of rentable sites. The total cost of the public works-which started in 1958 and should be completed by 1964-is estimated at between £50 and £60 mn. Of this, about two-thirds is borne by the Municipality of Rotterdam, and one-third by the Netherlands Government. Europoort will cover about 3,875 acres, of which about 2,325 acres are rentable sites, the remainder being reserved for port installations, canals, roads, railways, a heliport

Refineries at Rotterdam

GROWING quantities of oil are being handled at Rotterdam, mainly as crude for the local refineries and now also for the new trunk pipeline to Godorf and Gelsenkirchen in Western Germany. There are at present three refineries in the Pernis and Botlek areas of Rotterdam harbour (east of Europoort), belonging respectively to Royal Dutch/Shell, Caltex and Esso. Their combined throughput capacity is now about 23 mn tons a year, and a substantial part of their output is exported to European countries. The 285-km 24-in crude oil pipeline to Godorf near Cologne (linking up with a previously completed line from Wesel to Gelsenkirchen) was opened last summer with an initial capacity of $8\frac{1}{2}$ mn tons a year, eventually to be raised to 20 mn tons. Europoort will, of course, be connected by supply lines both with the Botlek/Pernis area and with the terminal of the Rotterdam-Godorf line, and large oil storage installations are being erected -some have already been completed-by Royal Dutch/ Shell, Caltex and Esso. Tidewater is considering renting an area for a large oil depot.

Rapid Growth of L.P.G. Fleet

THE CURRENT issue of The Compass, magazine of the marine sales department of the Socony Mobil Oil Inc, describes the rapid growth of the tanker fleet of A/S Kosangas, the Danish marketing company for liquefied petroleum gas. Acquired and renamed 20 years ago by the four Tholstrup brothers, this company has expanded to a remarkable extent as the use of bottled gas has grown. In 1947 the company sold 850 tons of L.P.G.; by 1959 its annual sales amounted to 40,000 tons. The company was of course one of the pioneers in the movement of L.P.G. by sea in bulk. Its first ship, the Kosangas, was a converted coaster fitted with a tank to carry 68 tons of liquefied gas. This was followed by the Rasmus Tholstrup, which with its 12 vertical tanks carrying a total of 300 tons of gas was the forerunner of today's growing fleet of L.P.G. tankers. The Kosangas fleet now numbers 13 ships, with another due for delivery in 1962.

RECENT SHIP SALES

MOTOR LINER Lavoisier (9,493 dwt, 11,969 grt, 6,737 nrt, built St Nazaire 1950 by Chantiers de la Loire) sold by Cie. Maritimes des Chargeurs Réunis to Italian buyers, reported to be the Compagnia Genovese di Armamento, for about £500,000 with prompt delivery. The deal is reported to be still subject to French Government approval.

The cargo steamer City of Newport (10,657 grt, built 1943) was not sold to N. & J. Vlassopulos Ltd, London, as reported in last week's Shipping World, but to the Veritas Shipping Corporation, Panama, for which N. & J. Vlassopulos Ltd act as agents.

Motor tanker *Delian Spirit* (16,349 grt, 24,700 dwt, 9,423 nrt, built 1961 by Netherlands Dock & Shipbuilding Co) sold by Shipping Developments Corp. S.A., Panama (A. Lusi Ltd) to U.S.S.R. through Harley, Mullion & Co Ltd for £1,600,000 cash, prompt delivery from shipyard, and renamed *Gurzuf*.

Cargo steamer Reynolds (6,247 grt, 10,220 dwt, 3,403 nrt, built 1953 by Wm. Pickersgill & Sons Ltd) sold by the Bolton Steam Shipping Co Ltd to the United Oriental Steamship Co Ltd, Karachi, for £275,000.

Cargo steamship Cestos (ex-Ensenada, 7,207 grt, 10,800 dwt, 4,360 nrt, built by California Shipbuilding Corp.) bought by the Nigean Shipping Co S.A., Panama, for £108,000 at an auction in Malta.

Motor vessel Welsh Trader (9,535 dwt, 5,671 grt, 2,974 nrt, built 1954 by Wm. Pickersgill & Sons Ltd) sold by Trader Navigation Co Ltd to Stephens Sutton Ltd for £425,000 with delivery July at Durban.

Cargo steamer Stanfirth (9,904 dwt, 7,285 grt, 5,147 nrt, built by J. Readhead & Sons Ltd, launched 1944, completed 1948) sold by Stanhope Steamship Co Ltd to Lebanese clients of N. & J. Vlassopolo, London, for £80,000 with "as is" delivery with survey due.

Motor tanker *Tibetan* (18,610 dwt, 12,548 grt, 7,144 nrt, built 1954 by C. Connell & Co Ltd), sold by Wilh. Wilhelmsen to Shell Canadian Tankers Ltd for \$1,250,000 and being renamed *Northern Shell*. She will give charter-free delivery at the end of May.

Motor tanker Kollstein (15,550 dwt, 9,864 grt, 5,774 nrt, built 1950 by Eriksbergs M.V.) sold by A/S Kollbjorg & Odd Bergs Tankrederi A/S to Erling Hansen, Kristiansand S., for £205,000 with charter-free delivery July.

Motor tanker Jalta (12,290 dwt, 8,247 grt, 4,674 nrt, built 1948 by Harland & Wolff Ltd) sold by Bulls Tankrederi A/S (Anders Jahre & Co A/S) to Argentine buyers for £155,000 with charter-free delivery May.

Cargo steamer Parcorali (ex-Baron Napier, 3,727 grt, 2,223 nrt, built Glasgow 1930 by D. & W. Henderson & Co Ltd) sold by Cia, de Vapores Corali Ltda, Monrovia, to Hong Kong shipbreakers.

Cargo steamer Theta Star (ex-Hans Erich J. Nimtz, ex-Hans Erich, ex-Paddington, ex-Thomas Holt, 3,601 grt, 1,961 nrt, tuilt 1929 by Cammell Laird & Co Ltd) sold by Theta Shipping Co Ltd to Hong Kong shipbreakers.

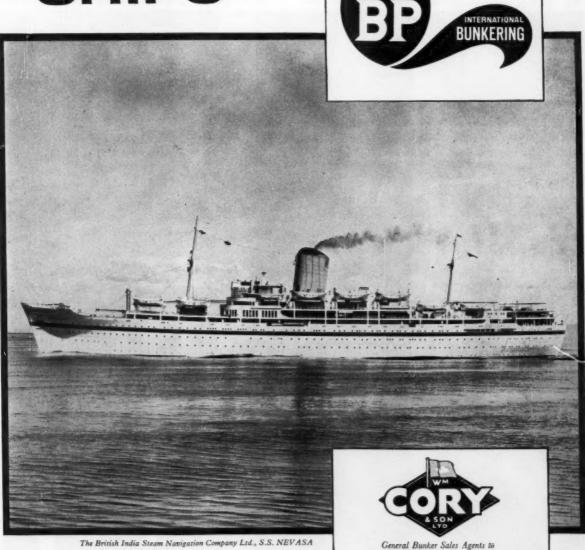
Cargo steamer Clan Lamont (7.673 grt, 3,501 nrt, built 1939 by Greenock Dockyard Co Ltd) sold by The Clan Line Steamers Ltd to Japanese shipbreakers for £128,000 with delivery Japan during August or September.

Cargo steamer Jenny (ex-Novor Jenny, ex-Ivor Jenny, 7,135 grt, 4,341 nrt, built Vanccuver 1943 by Eurrard Dry Dock Co Ltd) sold by Marifortuna Naviera S.A., Panama, to Japanese shipbreakers for £70,000 with delivery Japan during July.

Cargo steamer La Fleche (ex-Fort Albany, 7,131 grt, 4,243 nrt, built Lauzon, P.Q., 1943 by Davie Shipbuilding & Repairing Co Ltd) sold by Cia. Atlantica Pacifica S.A., Panama, to Japanese shipbreakers, for £69,500 with delivery Japan end August.

(Continued on page 466)

OIL **POWER FOR** SHIPS



The British India Steam Navigation Company Ltd., S.S. NEVASA

WM. CORY & SON LIMITED . CORY BUILDINGS . FENCHURCH ST. . LONDON E.C.3.

BP TRADING LIMITED

FIRST CARPET TO HAVE A HEAD FOR BUSINESS

The Rauer on Lac Hatel Turich



New high-performance fibre— Acrilan 15— dramatically lowers costs of carpet maintenance

New Acrilan 15 carpet fibre is a real business proposition. It has been specially developed by Chemstrand Ltd. for the carpet industry and it is very well worth considering for anyone involved in large-scale carpeting projects. Consider its many advantages:

Acrilan 15 has excellent soil and stain resistance. The individual fibres are smooth and rounded, so loose grime is not ground in, but easily lifted out by vacuuming. The fibre also has very low moisture absorbency, which means that stains are quickly washed off by ordinary spot-cleaning methods, without special solvents. Carpet of Acrilan 15 responds excellently to overall shampooing when necessary, and dries fast.

Acrilan 15 is the most resilient fibre ever used in carpets. This means, of course, that the pile of a carpet of Acrilan 15 stays rich and springy long after other carpets would crush or mat down.

Acrilan 15 has excellent abrasion resistance too. Tests in which hard twist carpets of Acrilan 15 and traditional carpet were shampooed with high-speed rotary brushes proved that Acrilan 15 has far greater twist and texture retention than traditional carpet. Commercial cleaning methods blur neither the texture nor the pattern of carpets of Acrilan 15. Acrilan 15 is proof against moth and mildew.

To sum up, carpets of Acrilan 15 save money in two main ways. First, in maintenance, because Acrilan 15 cleans so easily and resists permanent stains. And second, in replacement costs, because Acrilan 15 resists both wear and crushing so magnificently. Carpets of Acrilan 15 are now made by many leading manufacturers in all modern weaves and textures. And they cost no more than traditional carpets of equivalent quality.

If you would like more detailed information about the capabilities of carpet in Acrilan 15, write to Chemstrand Ltd., 8, Waterloo Place, London, S.W.1 for list of manufacturers.

Big hotels throughout the world use carpet made with Acrilan 15. Naturally—it's sound business. The picture of the dining room of the Bauer au Lac Hotel, Zurich, shows new Acrilan 15 carpet. It is not difficult to imagine the tremendously hard wear, and the constant traffic to which this carpet is subjected. Wherever carpet made with Acrilan 15 is laid—in public buildings, restaurants, luxury liners—reports on wear, colour retention, and easy maintenance, are always completely satisfactory. Now, very soon, look out for further dramatic proof of this new high-performance fibre—Acrilan 15!

ACRILAN

Acrilan is the regd, trademark for the acrylic fibre supplied by Chemstrand Ltd.

Chemstrand makes only the fibre—Britain's finest Carnet Manufacturers ilo the rest.

RECENT TECHNICAL DEVELOPMENTS

New Version of CP.125 Air Compressor

THE NEW VERSION of the 125 cfm rotary "Power Vane" compressor, introduced by the Consolidated Pneumatic Tool Co Ltd, 232 Dawes Road, London SW6, features a new streamlined canopy and a towbar support. This new model has greater visual appeal than the older version which it supersedes and the new canopy provides easy access to the engine and com-pressor. The basic compressor design is unchanged, this conpressor. The basic compressor design is dicharged, this consisting of two eccentric vane-type compression stages being mounted in line with the engine, positive alignment of the engine and the first stage compression casing being by a tandem piece with a further tandem piece separating the two compression stages. The compressor is powered by a fourstroke, four-cylinder Ford 592E water-cooled direct-injection diesel engine which develops 47 bhp at a governed speed of 1,800 rpm on a continuous 12 hour rating. A 12-volts electric starting system is employed. The standard two-wheel mounting is supplied with a retractable towbar support wheel, but a four wheel mounting may be supplied where required. The two-wheel version can be towed at road speeds of up to 20 mph, parking and overrun brakes being fitted. A hinged rear cover gives access to two 3/4 in take-off cocks and fuel and compressor oil fillers, while the hanged side shutters, which can be locked, are held in position by short sliding arms. The maintenance tool box is fitted under the canopy. The overall length of the compressor including the towbar is 12ft 5in, the width being 5ft lin and the height is 5ft 7½in. The net weight, dry, is 3,192 lb.

New Public Address Unit

REDITUNE LTD, of Croydon, a member of the Rediffusion group of companies, has introduced a public-address unit which can be linked to their background music system. Called the T.P.7 microphone pre-amplifier and microphone, it consists of a desk microphone with a switch, and a small pre-amplifier box measuring 6:n by 5in by 2in, which contains its own power supply. Located on one panel are the input and output connections, mains input socket, mains switch and a pre-set volume control. The pre-amplifier box is connected with a modified tape player, the T.P.I. Mark V (M), which holds



standard 90-minutes background music tapes. The music is cut out automatically by pressing the microphone switch, enabling announcements to be made over the same speakers which carry the music. The public-address system may be rented as an optional extra for approximately £6 a year. The basic annual rental for the background music installation is £65 which includes a tape-layer, six tapes changed every three months, and one speaker. Additional tapes and speakers can be rented for a nominal charge.

THREE new publications have been received from the National Gas & Oil Engine Co Ltd, Ashton-under-Lyne, giving the latest information on their R4A, F and B series engines. These engines cover a range from 129 up to 2,400 bhp, the largest size being the Regal range, developed from the National B4A engine.

PAY, PRODUCTIVITY AND PEACE

(Continued from page 452)

that adoption of new techniques, revised layouts and new machinery are sometimes held up by fear of unemployment.

Obviously in present conditions every yard cannot guarantee full employment for all its employees. Yards with only enough work for a few months ahead or for only a fraction of their labour force, are in no position to give guarantees of any kind. On the other hand, a start could be made in those yards where the position is secure—at least for the next year or two—despite the fact that increased productivity means more work from the same labour force or initially the same amount of work by a smaller number of men. Contrary to most thinking, there is usually no need to fear giving a guarantee of employment for as far ahead as the order book will permit.

Labour Wastage

What is not generally appreciated by shipyard managements is the extent of the normal labour wastage which goes on in every yard. Nowhere in industry have I met a company where labour turnover is less than 10 per cent per annum. The national average is at least twice this figure and I have come across many examples in the shipbuilding industry where annual turnover has reached 40 per cent or 50 per cent.

Controlled intake allied with normal wastage will very soon reduce a labour force to the appropriate level. Even using the conservative figure of 10 per cent per annum labour turnover, productivity would need to be increased by 25 per cent within two years merely to retain the previous output level. If one further assumes that wage levels remain reasonably constant for two years, unit labour costs would be reduced by the same amount, i.e. 25 per cent—more than enough to compete successfully with most Continental yards and perhaps leave something over for an earnings increase for the shipyard workers. Within five years we could afford to pay the highest wages in Europe and still build ships at the lowest cost without any fear of labour surplus or empty berths.

Should adoption of these ideas, merely a simplified and rational wave structure, coupled with a "code of practice", which would provide a degree of security, prove to be a success in any one yard the results would reverberate throughout the country and it could not be long before other yards would adopt the same practices, with a consequent upsurge throughout the whole country.

What about union opposition, even assuming the readiness on the part of management to cooperate in a pilot scheme? Several unions have already indicated their approval of the principles involved, if not of the scheme itself. Other unions which at present object to work study techniques may well change their minds and cooperate in an investigation towards establishing a rational and up-to-date wages structure for the industry, particularly if this is associated with a greater degree of security for their members. Some unions may of course reject it on no more realistic grounds than an innate objection to anything new-to anything which might interfere with established practices which at the moment happen to be to their immediate advantage. These unions, however, might well consider what will happen to these practices if there are no orders to sustain them and what will happen to the unions themselves if their membership drifts away for lack of jobs in the industry or an absence of confidence in its future.

There may also be voices raised asking why my own company should offer to carry out a wage review costing perhaps £5,000 at no charge to employers who could well

afford it. The answer is that we feel that the health of any industry is vital to the economic health of the nation and is therefore equally vital to organisations, like my own, which exist to improve industrial standards. would be our hope that once the proposed review had been carried out, many of the yards, first on the Clyde and then elsewhere, would follow the pattern already established. This could only benefit the shipbuilding industry, which is one of the mainstays of the economy in regions like Clydeside. It is no exaggeration to say that approximately one person in ten, maybe as many as 250,000 souls, depend on shipbuilding directly or indirectly for their livelihood. So it is absolutely vital that shipbuilding should flourish; but it can only flourish if it is competitive, and it will only be competitive if productivity and good labour relations match the traditional high level of skill, quality and design.

It may well be that some toes will be trodden on in the process of transformation, but is the price not worth paying; is the attempt not worth making, when the future of a whole industry and hundreds of thousands of people is at stake?

BRITISH FAIR IN MOSCOW

The Principal Maritime Exhibits

The principal items of maritime interest at the Britsh Trade Fair in Moscow, which will be open from May 19 to June 4, are on the stands of three industrial groups—Lithgows, Vickers and English Electric. The Vickers group has by far the largest individual pavilion in the grounds of Sokolniki Park, having two floors with a total area of 7,400 sq ft. The 25½ tons of steel used in its construction was supplied by the Palmers Hebburn works of Vickers-Armstrongs (Shipbuilders) Ltd. A model which occupies the complete length of one side of the pavilion represents a land area some five miles long, showing steelworks, docks and harbour installations, shipyards and other industrial activites. A working model of the 10-tons hovercraft now under construction at South Marston will be featured. Other Vickers products represented include the hydraulic trawl winch, steering gear, marine gearing etc.

Shipbuilding and marine engines are featured on the Lithgow group stand. Lithgows Ltd are exhibiting a model of the J. & C. Harrison cargo vessel Harmattan; while the Fairfield Shipbuilding & Engineering Co Ltd is showing a fully sectioned and workable model of a Doxford P-type engine and an illuminated flow feed cycle diagram for a 19,000-shp double-reduction geared turbine installation incorporating the Fairfield reheat system. Rankin & B.ackmore Ltd exhibits include a half-scale model of a Mk II 3,000-hp exhaust gas reversing turbine for marine installation. R. Y. Pickering & Co Ltd, another member of the Lithgow group, is exhibiting a lightweight portable vacuum clamping machine which has been introduced to assist welding and plating.

The Marconi Marine stand forms part of the English Electric group stand, and a wide range of marine radio, radar and electronic aids to navigation and fishing will be on display. Two new instruments, "Argonaut" and "Lodestar", which have proved successful in the Oriana, will be exhibited at the Fair. Argonaut" is a 50-channel VHF transmitter/receiver providing a short range radiotelephone service with port and harbour authorities and with new VHF public correspondence stations being built round the coast of Britain. "Lodestar" is an automatic direction-finder designed for vessels of all sizes. The powerful "Fishgraph" echometer, which has detected marine life at more than a mile beneath the surface of the sea, is to be demonstrated to officials of the Soviet fishing industry, together with the more compact "Graphette". These two echometers, together with the "Seagraph", employ a dry-paper system to record fish indications and depth but a new system will also be exhibited for the first time at Moscow. Called the "Metron", it gives a clear, unambiguous pointer indication of the actual depth below the vessel. A simple form of computer differentiates between the true bottom echo and spurious re-echoes and interference, feeding a positive signal to the meter which will record a change of depth immediately.

New Plath Gyro Compass

NOVEL DESIGN OF BINNACLE

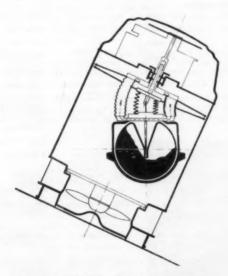
THE Hamburg firm of gyro compass manufacturers, C. Plath, has developed a new type of gyro compass. Successful sea trials with this compass were carried out earlier this year in the Finnish icebreaker Sampo, the compass being installed in the wheelhouse (it is normally installed below the waterline in these ships) in order to give the maximum shock-loading of the instrument during icebreaking. Production of the new unit is well advanced, and delivery of the first production equipment is due this summer.

The sensitive element of the new compass retains the centring pin principle used previously, and the main novelty about the design lies in the binnacle and the mounting of the compass. Here the aim has been both to simplify the equipment and also to improve its performance, with the intention of compensating for increased costs of labour and materials.

With the new design the binnacle supports a compass container in which the sensitive element floats completely submerged. The system of suspension and damping which is used in the binnacle maintains the container absolutely steady in a vertical position, independent of any roll or pitch of the ship. With this arrangement it is impossible for the sensing contacts on the container to come out of alignment with the contacts on the sensitive elements.

Novel Suspension System

The system of suspension and damping used is an entirely new one. Instead of the normal gimbals, the compass container is suspended from a single point by means of a nylon rope. This is able to bend, but not to twist, and so eliminates any freedom of rotation in azimuth of the container. The damping system makes



Sectional drawing showing working of bellows

use of a viscous fluid. Four interconnected folding bellows, filled with this fluid, damp out any tendency for the container to move from the vertical position. Even the commonly experienced "apparent vertical" positions





The Plath gyro compass binnacle with covers on (left), and opened up to show the container (right)

are almost eliminated by this damping system.

The use of the nylon rope for suspension has a further advantage in that it prevents any horizontal vibrations being transmitted to the compass container. Vertical vibrations of the ship are absorbed by means of a combination of this suspension and a system of interconnected steel rods. These rods are designed to function as springs with a very low natural frequency, and this low frequency prevents any resonance between the ship and the gyro compass.

The follow-up system of the compass remains the same as has been used for many years. This system has proved to be very satisfactory in use. The entire follow-up system, and also the control and fuse boxes, are incorporated in the upper part of the binnacle.

The compass is read by means of a dual card system fitted in the hood of the binnacle. One card is divided into 360 deg, and the other into 10 deg. The master compass can therefore be used as a steering compass, and provides easy reading of the heading by the helmsman. With this design, the controller box which was previously used, containing the amplifier and the follow-up system, has therefore been eliminated. The equipment thus consists only of the binnacle and the necessary converter unit to provide the correct electrical supply for the system. The new compass is thus well suited to small craft such as coasters, where the master compass is installed on the bridge and no other repeaters are required. It has been found possible to reduce the price because of the simplicity of the new system.

Maintenance has been considerably simplified with the new design. As the container is a completely sealed unit, the fluid in it cannot evaporate and therefore requires no attention. To compensate for temperature changes, an expansion chamber has been introduced into the container.

Cooling of the compass is effective, due to the fact that the circulating air has access to the whole surface of the compass container. A fan is installed in the base of the binnacle, and owing to this efficiency it needs only to run at low speed and is therefore almost noiseless. The air is drawn in from above and expelled from the binnacle by the fan, and this prevents any dirt from the deck being introduced into the binnacle.

NEW CONTRACTS

Shipowners	No. of Ships	Туре	Tons d.w. (gross)	Dimensions (ft.) L.b.p.(o.a.) × 8 × D.(dft.)	Delivery	Speed (knots)	Propelling Machinery	Total h.p.	Engine Builders	Shipbuilders
				Yards in Great	Britain an	d North	ern Ireland			
Gove of Ghana	2	Stern	200	(130)	1962	-	Diesel	-	_	T. Mitchison (1); P. K. Harris (1)
Sovt of Ghana	4	Fishing vessels	250	(130)	1962	11	Diesel	1,000	National Gas	T. Mitchison (2); P. K. Harris (2)
					Overseas 1	fards				
Rederi Vikinglinjen	1	Ferry	1000		1962	19	Twscr. diesel	5,760	-	Hanseatische Werft

LAUNCHES.

				L	AUNCHES					
Date	Shipowners	Ship's Name and/or Yard No.	Туре	Tons d.w. (gross)	Dimensions (ft.) L.b.p.(o.a.) × B. × D.(dft.)	Speed (knots)	Propelling Machinery	Total h.p.	Engine Builders	Shipbuilders
			Yards	in Great	Britain and Norther	n Irelan	d			
May 2	Tees Towing Co	Danby Cross	Tug	-	80(87) × 23.5 × 11 (11.75 max)	-	Diesel	750	Crossley Bros.	James Pollock Sons & Co
May 2	Sir Thomas Robinson	Tiberian (1464)	Trawler	(300)	120×25.5×12		12-cyl Brons diesel	780	Drypool Eng.	Cochrane & Sons
May 2	City Steam Fishing Co	Arlanda (966)	Trawler	(410)	137.2 × 28 × 14.5	-	8-cyl diesel	1,100	Mirrlees Bickerton & Day	Cook Welton & Gemmell
May 4	British & Burmese S.N. Co	Pegu (1142)	Cargo	9,300 (6,300)	470 × 59.75 × 38	.14	4-cyl H &W/ B & W diesel	5,250	J. G. Kincaid	Lithgows
				C	Overseas Yards		0.000			
April -	Suomen Tankkilaiva O/y	Wilke (1066)	Cargo	13,400	441 × 64 × 39.67(29.9)	15	9-cyl Sulzer diesel	6,300	Shipbuilders	Wartsila- Koncernen A/B, Crichton-Vulkan
April -	- Union Miniere et Maritime	Melusine (311)	Bulk	10,000	433.1 × 61 × 35.58 (23.5)	14.4	Doxford diesel	6,000	Shipbuilders	Ch. et At. de
April I		Havlom (523)	Cargo	(9,850)	464.67 × 63.9 × 39 (29.9)	17	Diesel	9,000	M.A.N.	Lubecker Flender-Werke
April 15	Tschudi & Eitzen, Oslo	Siletta (944)	Cargo	10,000	450 × 62.9 × (29.5)	15	7-cyl M.A.N.	6,150	Shipbuilders	Howaldtswerke
April II	Jugobanka, Beograd	Idrija (233)	Bulk	18,400 (13,750)	527.58 × 70.58 × 29.42	15	8 & W diesel	8,300	Shipbuilders	Brodogradiliste ''Uljanik''
April 23	Grimaldi Cia. di Nav. S.A.	Giovanni Grimaldi (1865)	Bulk	(16,200)	587.25 × 75.75 × 45.58	16.5	Fiat diesel	9,000	Shipbuilders	Cant. Riuniti dell 'Adriatico
April 25	(S.A. Somerfin)	. Tropicana (89)	Refrig.	5,400	410×56.1×37(25.2)	18.25	Diesel	9,000	Sulzer Bros	Empresa Nacional
April 27	Johs. Larsen	Anne Reed (146)	Cargo	(9,300)	461.25 × 62 × 39.25 (30.25)	-	G.V. diesel	6,300	Shipbuilders	Marinens Hovedverft
April 30	Sanko Kisen K.K.	Toko Maru (566)	Tanker	32,800 (28,800)	629.67 × 86.75 × 45.33 (34.2)	15	Sulzer diesel	11.000	Shipbuilders	Ishikawajima- Harima H.I., Aioi
May	B. Svalander	Aralizz (174)	Bulk	16,800 (12,000)	480(518.25) × 71 × 42 (30.75)	15	6 cyl diesel	7,500	Gotaverken	Oresundsvarvet
May !	Rederi Hans von Rettig, Abo	Hansa (361)	Cargo	10,500	440(485) × 61.5 × 30.5(30)	15	Diesel	6,350	Gotaverken	Oskarshamns Vari
May IC		Oschi River (568)	Cargo	9,280 (7,000)	457.67 × 60 × 35.75 (27.58)	15	5-cyl Sulzer diesel	4,500	De Schelde	Orenstein-Koppell

TRIAL TRIPS

Date	Shipowners	Ship's Name and/or Yard No.	Туре	Tons d.w. (gross)	Dimensions (ft.) L.b.p.(o.a.) × B. × D.(dft.)	Speed (knots)	Propelling Machinery	Total h.p.	Engine Builders	Shipbuilders
			Yards	in Great !	Britain and Northern	Ireland	1			
Mar. 9	Norwest Sand & Ballast Co	Norstar (433)	Suction	(586)	(156.67) × 36.1 × (13.9)	-	5-cyl diesel	-	Ruston & Hornsby	Chas. Hill & Sons
Mar. 23	Small & Co (Lowestoft)	Suffolk Mariner (460)	Trawler	(202)	(106.5) × 23.33	-	5-cyl diesel	540	Ruston & Hornsby	Richards Ironwork
Mar. 24	Wm. Carnie	Schiehallion	Trawler	(239)	(108) × 23.33	_	6-cyl diesel	_	Ruston & Hornsby	Livingston & Co
Mar. 27	Peter Sleight Trawlers	Scampton (776)	Trawler	(210)	106(118.75) × 23.75 ×	11	S-cyl diesel	622	Ruston & Hornsby	Richard Dunston
Mar. 28	Talisman Trawlers	Carlton Queen (280)	Trawler	(210)	(116.9) × 23 × 11(9.33)	-	6-cyl diesel	550	Crossley Bros.	Brooke Marine
Mar. 28	Ashley Fishing Co	Juniper (504)	Trawler	(237)	(115.33) × 25.33 × (11)	-	8-cyl diesel	660	Lister Black- stone	T. Mitchison
Mar. 28	Red Funnel Steamers	Thorness (4194)	Tug	(238)	100(112.42) × 27 × (13.67)	-	Twscr. diesel	1,400	Crossley Bros.	John I. Thornycroft
Mar. 29	Colne Fishing Co	Grayfish (1048)	Trawler	(160)	93(102.9) × 21.25 × 10.75	10	6-cyl diesel	338	Ruston & Hornsby	Richard Dunston
May -	Esso Petroleum Co	Esso Jersey (425)	Coastal	(350)	114×24×10.2	_	4-cyl diesel	300	Lister Blackstone	Scott & Sons
May I	St. Andrew's Steam Fishing Co	D. B. Finn (524)	Trawler	(700)	182.5 × 32 × 16.25	15.5	Werkspoor	1,600	C. D. Holmes	Goole S.B. Co
May 4	Burwood Fishing Co. Aberdeen	Burwood (522)	Trawler	(250)	(115.33) × 25.33 × (11)	-	6-cyl diesel	-	Mirrlees Bickerton & Day	T. Mitchison
May 5	Clan Line of Steamers	Clan MacNab (497)	Cargo	10,600 (9,428)	468 × 61.5 × 38(26.58)	15.75	6-cyl Doxford diesel	6,400	Wallsend Slipway	Greenock Dockyard
May 5	Donvale Trawling Co	Donvale	Trawler	(48)	74×19.5×10.5	-	Diesel	264	Lister Blackstone	John Lewis & Son
May 18	Cia. Nacional de Navegacao	Principe Perfeito	Pass	(19,000)	570(625) × 78.5 × 35.5	20	Twscr. geared turbine	24,000	Shipbuilders	Swan, Hunter, Walker
				(Overseas Yards					
April —	Free German Trade Unions	Fritz Heckert	Pass	(7,200)	410(463) × 57.75 × (18)	-	Free-piston gas turbine & M.A.N. diesel	5,000	D.M.R.	VEB Mathias Thesen Werft
April -	Cia. Trasmediterranes	Ciudad de Tarifa (79)	Ferry	(4,700)	-	17.5	B & W diesel	5,300	Maquinista	Union Navale de Levante
April —	Aug. Bolten	Mathilde Bolten (518)	Cargo	(12,500)	493.67 × 66.25 × 44.25 (32.1)	16	7-cyl Fiat diesel	8,400	Borsig A.G.	Lubecker Flender-Werke
April —	Porta Reederei	Steintor (949)	Cargo	(9,200)	450 × 62.75 × (30.1)	15	6-cyl M.A.N. diesel	6,750	Shipbuilders	Howaldtswerke
April -	Petroleo Brasileiro	Taquipe (159)	Tanker	(6,900)	410 × 62 × (30.75)	12.7	7-cyl diesel	3,550	Burmeister & Wain	Odense S.B. Co
April -	Rolf Wigand, Bergen	Jonwi (420)	Tanker	19,600 (12,600)	525 × 71.9 × 40.1(30.9)	15	Diesel	8,200	Sulzer Bros	Bergens M.V.
April -	A/S Grenaa- Hundestad Faergefart	Kattegat (154)	Ferry	(2,200)	262.5 × 49.25 × 17.42 (13.75)	17 (T)	Twscr. diesel	5,000	Burmeister & Wain	Marinens Hovedverft
April —		Katendrecht (774)	Cargo	(0,000)	442.95(473.33) × 66.25 × (28.5)	16	6-cyl M.A.N. diesel	7,800	Shipbuilders	Wilton-Fijenoord

MARITIME NEWS IN BRIEF

EMBERS of the Committee appointed under the chairmanship of Lord Rochdale to inquire into the major docks and harbours of Britain will be Messrs J. Maurice Laing, Ian W. Macdonald, E. G. Whittaker and Richard Wills. The Committee will have the advice of Sir Eric Millbourn, Honorary Adviser to the Minister on Shipping in Port. Mr Laing is managing director of John Laing & Son Ltd, builders and civil engineers; Mr Macdonald is chairman of the National Commercial Bank of Scotland and a former Professor of Accountancy at Glasgow University; Mr Whittaker is transport adviser to Unilever Ltd, vice-president of the Institute of Transport and vicechairman of the Central Transport Consultative Committee: Mr Wills is managing director of George Wills & Sons Ltd, export and import merchants, a vice-president of the Association of British Chambers of Commerce, deputy chairman of the Council of the London Chamber of Commerce and a member of the Export Council for Europe. The Committee will shortly be inviting interested organisations, including those representing port authorities, users, employers and labour, to furnish them with any information and observations which may be of assistance to them. Any communications should be addressed to the Secretary to the Committee, Mr D. G. Fagan, St Christopher House, Southwark Street, London SE1.

THE death has occurred of Mr T. G. Faulkner, City representative of W. H. J. Alexander Ltd for the past 49 years. He had been with the company for 58 years, having joined as a boy in 1903.

IRISH SHIPPING LTD have made the following appointments: Mr R. J. O'Halloran, assistant general manager; Mr J. P. Hamilton, construction manager; Mr P. P. English, secretary; Captain P. A. Brennan, superintendent; Mr T. E. Flynn, accountant; Mr B. W. Lynch, services manager—head office; and Mr P. J. Crowley, acting manager—Cork office.

MR K. R. BÖKMAN has retired after 30 years as managing director of the Swedish Lloyd Company. Immediately upon his formal retirement as managing director, he was elected chairman in succession to Mr Ebbe Lundberg. Mr Bökman's successor is Mr Kjell Andersén, whose post as vice-managing director is taken over by Mr Torgeir Christoffersen.

MR V. NYHOLM of A/S Det Dansk-Franske Dampskibsselskab, Copenhagen, has been appointed to a post in the company's management. Mr E. Hahn-Petersen, who has directed operations as managing owner, has become managing director with the retention of his former position. Mr Chr. Andresen, a director, has retired, while Mr Niels Kampmann has been elected in his stead.

MR THOMAS KIRK, who has been the Queen Elizabeth's staff chief engineer since November 1960, has been promoted to chief engineer. He succeeds Mr Stanley Hudson, who is on leave pending retirement at the end of this month.

CONSUL HOLGER NORDBERG has been appointed managing director of Henry Nielsen Oy/AB., Helsingfors, in the place of the late Mr Henry Nielsen. Mr Finn Stangebye is the new vice-

managing director. Mr Berndt Aminoff has been appointed managing director of the affiliated companies A/B Helsingfors Steamship Co Ltd and Oy Tank-Tonnage A/B. Consul Nordberg has also been appointed managing director of the daughter company A/B Johnsonlinjens Agentur.

MR W. H. SHARLAND, deputy chairman of Powell Duffryn Ltd, has been re-elected chairman of the Seaborne Coal Traders' Association. Mr Donald Dobson has been re-elected vice-chairman.

MR D. R. Moloney has been appointed outward freight manager of the Shaw Savill Line as from June 1.

MR R. S. GILLING has been appointed manager of the Associated Electrical Industries Ltd Military and Marine Radar Works at Blackbird Road, Leicester. This is part of the Electronic Apparatus Division.

THE death has occurred of Sir John Hobhouse, a partner in the firm of Alfred Holt & Company from 1920 to 1957. He was associated with the late Lord Rotherwick in the formation of the General Council of British Shipping in 1941 and was chairman from 1942 to 1943. He was knighted in 1946. He retired from Holts in 1957 but served on the Chandos Committee in 1959.

MR R. J. MARSMAN, acting district manager in Mombasa of the N.V. Vereenigde Nederlandsche Scheepvaart Maatschappij has been appointed assistant general manager of the company in Amsterdam.

LORD DOUGLAS OF KIRTLESIDE, chairman of British European Airways Corporation, has been elected president of the Institute of Shipping & Forwarding Agents for the ensuing year. The new chairman is Mr E. T. Maples and the vice-chairman Mr D. I. Heys.

MR XAVIER SHIED and Mr A. Hanssens, both of the Armement Deppe S.A., have resigned as directors of Cie. Belge d'Expansion Maritime S.A. and have been replaced by Mr G. van Damme and Mr P. H. Saverijs, directors of the Boel et Fils shipbuilding company in Tamise.

PROFESSOR GEORGE TEMPLE has been appointed chairman of the Aeronautical Research Council. He succeeds the late Professor W. J. Duncan.

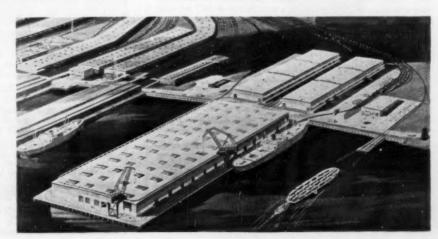
MR FRANZ HARTMANN has been elected a member of the board of Rederi A/B Transatlantic in succession to the late Mr Nils Parkfelt.

MR ERNST C:SON HERSLOW, chairman of the Kockums Shipyard, Malmö, has retired and has been succeeded by Mr Stig Sahlin, Swedish ambassador in Copenhagen.

Consul Sven-Åke Löfdal has succeeded Consul Otto Hillström as chairman of the board of directors of Rederi A/B Helsingborg & Rederi A/B Sirius.

PORT FACILITIES AT NORFOLK, VA.

A new general cargo terminal, costing about \$15 million, is to be built by the Virginia State Ports Authority at Norfolk. It will be located at Lamberts Point between Pier "S" and the new Elizabeth River Tunnel portal. The construction will start late this year and will take about two years to complete. It will have a reinforced concrete deck, 1,200ft long and 400ft wide, on open concrete pile foundations. The transit shed will provide 360,000 sq ft of space while a refrigerated warehouse will provide 100,000 cu ft



MR C. E. WRANGHAM, until recently deputy chairman of Davy-Ashmore Ltd, has been appointed chairman of Short Bros & Harland Ltd. Mr C. F. Uwins, who has held the position on a temporary basis since September 1960, will remain a director of the company.

MR P. B. BINSTED has been appointed director of Gulf Oil Marine Agency, Belgium

CLARKE, CHAPMAN & Co LTD, of Gateshead, have received an order to supply trawl winches for four Russian fish factory vessels building in Denmark by Burmeister & Wain.

THE BRITISH & COMMONWEALTH SHIPPING CO LTD are negotiating with the Industrial Development Corporation of South Africa Ltd, the controlling shareholders of the South African Marine Corporation (Safmarine), to effect a consolidation of the assets and services of Safmarine, the Springbok Shipping Co Ltd and Springbok Shipping Line Ltd into one unit under South African control.





NEW CANADIAN PACIFIC DIRECTORS

MR T. G. HUGHES (left) and MR R. R. JAMES (right) have been elected directors of Canadian Pacific Steamships Ltd. Mr Hughes has spent his career in the passenger side of the company which he joined in 1938. In 1952 he was appointed personal assistant and in 1956 chief assistant to the European general manager. He became European passenger manager in 1959. Mr James Joined the company in 1917. In 1928 he was appointed freight traveller in the European freight manager's department. He became assistant to the European freight manager in 1945 and recently European freight manager. Sir George Bolton, chairman of the Bank of London & South America, and a director of the Canadian Pacific Railway, has also been elected a director

During the year ended March 31, British European Airways carried 4,000,000 passengers as well as more than 50,000 tons of cargo and mail. Over 2,000 mm seat-miles were offered and 1,393 mm sold at a load factor of 66.7 per cent. Capacity ton-miles produced during the year totalled 237 mm, an increase of 24 per cent on the previous year, while load ton miles increased 19 per cent to 155 mm. Preliminary estimates show that BEA made a profit for the year of at least £11 m, after paying interest on all capital.

THE BID of Clan Line Steamers Ltd for the shares of Hector Whaling Ltd has now been accepted by more than 50 per cent of the shareholders. The final Clan Line offer was 26s for the preferred shares and 10s 6d for the ordinary shares. The other contestant for Hector Whaling was the South Georgia Co Ltd, holders of about 20 per cent of the Hector Whaling capital.

THE NORWEGIAN MINISTRY OF COMMERCE has drafted a 10-year programme proposing that Kr125 mn be spent on improved seamen's education. This comes in addition to the ordinary grants for the running of seamen's schools. The 10-year programme also makes provision when essential for a further Kr7.5 mn to be granted to purchase equipment for courses for engineering-candidates. Provided the present ordinary grants remain unchanged, they will total approximately Kr70 mn during the 10-year period.

FRANK C. STRICK & CO LTD announce that owing to congestion at the Port of Umm Said it has been found necessary to impose a surcharge of 10 per cent on all cargo shipped by vessels commencing to load at individual ports on and after May 15, and will operate until further notice. This surcharge will also apply to shipments from Continental ports.

VENEZOLANA INTERNACIONAL DE AVIACIÓN S.A. (VIASA), of Caracas, has become an active member of the International Air Transport Association. The new Venezuelan flag carrier operates routes from Caracas to Curaçao, Bogotá, Lima, Lisbon, Madrid, Paris, Rome, London and Amsterdam, and plans to begin services soon to Miami. New Orleans and New York.

RECENT SHIPS SALES

(Continued from page 460)

Cargo steamer Arena (ex-Orneborg, 1,754 grt, 1,067 nrt, built Rotterdam 1919 by Wilton's Engineering & Slipway Co) sold by Cia. de Nav. y Financiera Navicox S.A., Panama, to Italian shipbreakers.

Cargo steamer *Prenj* (ex-Bosanka, 3,690 grt, 2,278 nrt, built 1905 by Northumberland Shipbuilding Co Ltd) sold by Jugoslavenska Oceanska Plovidba, to shipbreakers, believed to be in Italy.

Motor vessel *Ingrid* (927 dwt, 497 grt, 240 nrt, built 1955 by Ottensener Eisenwerke A.G.) sold by Krogstad Cellulosefabrik, Drammen, to Swedish buyers for £92,250 including a time charter to Fred. Olsen until the end of 1961.

Motor vessel Glamis (600 dwt, 561 grt, 279 nrt, built 1936 by Caledon Shipbuilding & Engineering Co Ltd) sold by Dundee, Perth & London Shipping Co Ltd to Greek buyers. She has been renamed Romylia.

Motor vessels Waria and Wiril (each 1,225 dwt, 940 grt, 360 nrt, both built 1938 by Oresundsvarvet A/B) sold by Stockholms Rederi A/B Svea to Kvarnerska Plovidba, Rijeka, and renamed Plavnik and Platak respectively.

Motor vessel Kohlsleet (420 dwt, 299 grt, 149 nrt, built Hamburg 1950 by A. Pahl) sold by Hans Ruick & Rodolf Pahl (Johs. Those), Hamburg, to Danish buyers and to be renamed Hervard.

Motor vessel Purbeck (254 dwt, 199 grt, 121 nrt, built 1936 by Charles Hill & Sons Ltd) sold by Lockett Wilson Line Ltd to British buyers for £8,000 with prompt delivery Northwich.

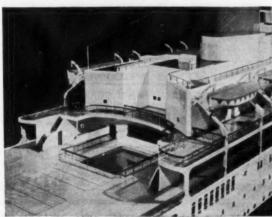
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Messrs. Alex. Stephen & Sons Ltd., Linthouse, launched the steamer Ellora on May 11. She is a sister ship of the Ellenga, recently built by them for the Indian coastal service of the British India Steam Navigation Co. Ltd. She is 410 ft. in length b.p., 52 ft. in breadth, and 35 ft. in depth. She has three complete decks, with bridge and boat decks above, and has accommodation for 50 first-class and 50 second-class passengers. Special provision has also been made for native passengers, two complete decks being reserved for their use. The propelling machinery consists of two sets of triple-expansion engines, constructed by the builders.

Many wonderful things were no doubt done at the Hendon Aerodrome on Friday afternoon. . . . Mr. Graham-White dropped oranges and plaster of Paris bombs within a marked area, about the size of a battle-ship's deck, hitting, so to speak, the bull's-eye several times. He dropped, from a height of 500 ft. to 600 ft., his stucco bombs upon a board 12 ft. by 12 ft., and followed this up by directing upon the same spot two 50-lb. sacks of plaster in succession. And these feats were performed whilst the biplane was travelling at forty-five miles an hour.





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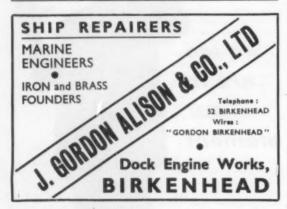
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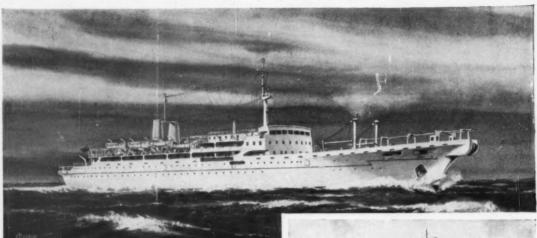
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